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COMPULSORY EDUCATION IN THE SOUTHERN COLONIES

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I. VIRGINIA

If one turns to the existing accounts of the history of American education in the colonial period of our history, he will observe that many writers assume that most of those persons who received any instruction attended organized schools. That such an inference is entirely erroneous is easily realized by the performance of a simple arithmetical problem—namely, that of dividing the population at any given date by the number of schools *known* to have been in existence at that date. The percentage of persons receiving a part of their education in such institutions would be highest in the New England colonies, but even in this section it would surprise most students if they were aware of how many learned how to read or write through some other agency than organized schools.[1]

If we pass beyond New England to the middle and southern colonies, it is safe to say that a still smaller percentage of the total number who secured the rudiments of an education received it in an organized school. It is doubtless true that there were many private schools whose existence we shall

[1] We find little or no recognition of the fact that there were other agencies for education than organized schools in such general histories of American education as those by Dexter or Boone; nor even in most state histories of education, like those of Steiner for Connecticut or Smith for North Carolina.

never be able to prove, but, even allowing for this possibility, it is not believed that the point made above would be greatly modified. It is therefore important to stress the agencies other than schools if we are to gain a proper perspective of the evolution of American education. The well-known tendency to read into the past the ideals, and even the institutions, of the present is responsible for a very common fallacy—that of mistaking the special for the general fact. Contemporary conditions, not later theories, govern and explain the development of institutions; and the general fact, the typical institution, cannot vary widely from the general conditions, which must in the long run determine what is general and what exceptional.

During the colonial period much the larger proportion of the people at any one time were living under frontier conditions. Wherever such conditions were the controlling factor, organized institutions, such as the church and school, were not general, except perhaps in portions of New England, notwithstanding the assertions of our enthusiastic and imaginative racial, sectarian, and other types of historians, who often assert the contrary but fail to produce the evidence.[1] When a given area ceased to be governed by frontier conditions, then organized institutions gradually became the general rather than the special fact. Frontier conditions imply, among other things, a sparse population; absorption of energies, time, and thought in satisfying material needs—shelter, subsistence, and protection; occupations largely connected with agriculture or extractive industries; lack of easy means of communication, and hence isolation, particularly in the late fall, winter, and early spring months; and, finally, conservation of labor, even of children, during those months of the year in which the farming operations are pressing. If we realize also the weak cultural ideals,

[1] Compare A. B. Faust, *History of the German Element in the United States*, II, 203–4; G. L. Jackson, *The Privilege of Education*, p. 67.

inevitable and inherent in frontier groups, and the impossibility of locating organized schools so that any large proportion of those of school age could be reached, under such conditions, even supposing the desire to exist, we can easily see that a great many persons who learned how to read and write must have taken advantage of other agencies than schools. Two were of the greatest importance—namely, home instruction given by the parents, and the apprenticeship system, instruction given by the master or his agent.

Both of these agencies were in common and voluntary use in every colony. Voluntary education through apprenticeship occurred when, through custom or agreement, an indenture was drawn so as to secure for the apprentice book or religious instruction, with or without instruction in a trade, and his maintenance, the latter being one of the main purposes of the system in its historical development. No special law concerning the enforcement of the indenture was needed in such cases, for indentures were almost universally looked upon as contracts, became a matter of public record, and hence were enforcible in the courts. In some of the colonies parental education was made compulsory through laws passed to this effect—as in New England. In this study we are concerned with the system of *compulsory* education in the southern colonies, Virginia in particular, as it was instituted by law through the agencies of parents, guardians, and overseers, and particularly through masters and mistresses in connection with the system of apprenticeship.

Having discussed the general factors[1] which influenced the development of education in the southern colonies, we will now note how far they enacted laws involving the principle of compulsory education, and first with respect to Virginia. In view of the factors mentioned, it is not surprising that laws of this

[1] *School Review*, May, 1919, article by the author on "The Educational Development of the Southern Colonies, Introduction."

character referred to *special*, rather than to *all*, classes of children, as was generally the case at first in New England.[1] The classes provided for were orphans, poor children, and those of illegitimate birth, in the last case with respect to three classes: first, those born of free white women and white servants, second, those born of convict servant women, and third, mulatto children born of a free, or white servant, mother. The conception that the state was in part responsible for the education of the classes mentioned was expressed in compulsory laws, specifying the machinery for enforcement, similar to those in New England.

ORPHANS

The first class provided for was orphans. The legislation respecting these unfortunates is relatively large in the southern and middle colonies as compared with New England, where there is hardly a reference to such children. No less than seventeen acts were passed by Virginia alone relating to this class, most of them involving the principle of compulsory education. The principal reason for the increase of orphans was the presence of the white servant, and to some extent the negro slave.[2] A little less than one year after Massachusetts passed her first act on compulsory education, that of June 14, 1642, Virginia enacted one in March, 1642/3,[3] relating to orphans, the first of many laws relating to this class. Because guardians and overseers had neglected and "very much abused" orphans' estates, they were ordered to report annually an account of the estate and their service to the commissioners

[1] See *School Review*, December, 1918, and January, 1919, for articles by the author on the legislation of the New England colonies on compulsory education. Some of the laws passed by the southern colonies, bearing on the compulsory education of special classes, are omitted in Clews, *Educational Legislation and Administration of the Colonial Governments*, New York, 1899.

[2] See Section below "Poor Children." The acts relating to orphans are concerned especially with the security of their estates. Minute regulations are set forth governing guardians, in order that the orphan might have the largest income possible from his estate and its increase, and that he might be maintained and educated in the best manner possible.

[3] W. W. Hening, *Statutes at Large* (Virginia), I, 260–61. Editions—N. Y., 1823, Vols. I–II; Phil., 1823, Vol. III; Richmond, 1814–21, Vols. IV–VIII.

of the county court. They were also ordered "to educate and instruct them according to their best endeavours in Christian religion and in rudiments of learning." If they were found delinquent in their duties in these respects, the commissioners were ordered to see that the said orphans were provided for "according to their estates and qualities."

The act of 1656[1] provided that orphans must be educated on the interest of their estates according to its proportion, but if "so meane and inconsiderable that it will not reach to a free education," then such orphans must be bound out as apprentices until twenty-one years of age, to learn some manual trade, unless friends or relatives agreed to keep them for the interest of their estate. The court was ordered to take sufficient security for orphans' estates, inquire yearly of the security, whether orphans were "educated according as their estates will beare," remove them to other guardians if notorious defect were found, and change the master of orphans bound as apprentices if he used them "rigourously" or neglected to teach them his trade.

It will be noticed that the degree of education varied with the estate and quality of the orphan, and that in case of orphans apprenticed no book education is specified, though the law seems to imply that the court should provide for such education in the indenture. It was not until 1705, however, that specific instructions were given to this effect. The act of 1656 is clearly compulsory in character, as it is mandatory and provides for education and for a penalty for neglect by the guardian or master, that is, removal of the child. An order of the assembly of 1659[2] required sheriffs to summon all persons to bring in their accounts of orphans' estates, and clerks of county courts to register these accounts. An "Orphan's Court,"[3] to consider cases concerning orphans, was held in one county as early as

[1] W. W. Hening, *Statutes at Large* (Virginia), I, 416.
[2] *Ibid.*, p. 551.
[3] *William and Mary College Quarterly*, V, 221.

1648.[1] A general act of 1645/6 had already provided that commissioners of county courts, neglecting to punish offenders "according to the merit of the cause," upon complaint could be fined at the discretion of the governor and council.[2]

An act of 1705[3] again repeated most of the provisions of the two earlier acts, but added for the first time a specific requirement respecting the education of apprenticed orphans; namely, that "the master of every such orphan shall be obliged to teach him to read and write." That of 1730[4] also reiterated the powers conferred in previous acts, declared that "great abuses" had been committed by guardians of orphans and justices of county courts, who had been negligent, and called again for annual reports by guardians, gave them custody of their "tuition," and gave power to the county court to make additional rules "for the better education and usage of orphans" when complaint was made that guardians were "neglecting the care of their education," with power to appoint another guardian, if the former did not "take due care of the educating and maintaining of any orphan, according to his degree and circumstances." The act of 1740,[5] for enforcing the execution of laws for better managing of orphans' estates, because of neglect by the justice of many county courts, recapitulated the previous orders and provided for an annual return

[1] An orphan's court was in existence in London in 1625/6. See *Fourth Report of Hist. Mss. Commission* (London, 1874), p. 7.

[2] HENING, I, 310. The act of 1661/2 which appears in the revisal of the laws of 1661/2 (*ibid.*, 41–43) was largely a re-enactment of that of 1656; that of 1672 gave power to the county courts to dispose of orphans' estates according to the best judgment of the justices, if they could not find persons to take the estates according to the regulations of previous acts; that of 1679 made justices who failed to take sufficient security for orphans' estates chargeable for all losses due to such failure (*ibid.*, II, 92–94, 295, and 444). These three acts were repealed by the act of 1705, but the main provisions were re-enacted and appear in the Virginia codes of the eighteenth century and hence were in force throughout the colonial period. See also *A Collection of all the Acts of Assembly, now in force*, etc. (Williamsburg, 1733), pp. 186–187; *The Acts of Assembly, now in force*, etc. (Williamsburg, 1752), pp. 226–228; *The Acts of Assembly, now in force*, etc. (Williamsburg, 1769), pp. 156–59.

[3] HENING, III, 375. This act repealed all previous acts on the subject. It appears in the code of 1733, pp. 186–87.

[4] *Ibid.*, IV, 286; also in the code of 1733, pp. 447–48.

[5] *Ibid.*, V, 100–101. The substance of this act was included in that of 1748.

to the August court of accounts of guardians, ordered the justices to direct process to issue against all guardians failing to appear, and provided for a penalty to be imposed on justices of county courts who neglected their duty, a forfeit of five thousand pounds of tobacco, one half to the use of the county and the other half to the informer.

The act of 1705 was the first to provide definitely for book education, and apparently made it *compulsory* only for boys. A failure to carry out the educational terms of the indenture, as in the case of those referring to trade education, might lead to the removal of an orphan apprenticed, as is proved by cases on record. The neglect by justices mentioned in the act of 1730 doubtless continued and led to that of 1740, providing for a severe penalty to be levied upon negligent justices. By this date then, the imposing of penalties was highly developed, as guardians, masters, and justices could all be penalized for neglect of orphans.

The last act passed before the Revolution was that of 1748,[1] in effect June 10, 1751. It was a codification of previous laws, and in fact repealed all former acts. Nearly all the former orders mentioned were repeated, and there was added this clause referring to orphans apprenticed: "Every male [to be apprenticed] to some tradesman, merchant, mariner, or other person approved by the court," to twenty-one years of age, and "every female to some suitable trade or employment" to eighteen years of age, and the master or mistress of such servant "shall find and provide for him or her, diet, cloathes, lodgings and accommodations fit and necessary, and shall teach, or cause him or her to be taught to read and write." This was the most comprehensive law enacted in the colonies on the education of orphans, and shows unexpected concern

[1] HENING, V 450–52, chap. vi. This act is in the code of 1752, pp. 226–28, and also appears in the code of 1769, pp. 156–59.

by Virginia for the education of girls as well as boys, of this class.

POOR CHILDREN

It has already been shown[1] that the nature of the population of Virginia, and of the South in general, was made up of several groups, such as the higher planter class, the smaller planter with a few slaves, the independent farmer, the white servant, who after his term of service of four or five years usually became a small farmer, a laborer, or an artisan, and the negro slave. Out of the last class there developed two more, the free negro and the mulatto servant; the latter, born of a free white mother or white servant, after a long period of service becoming a free man or woman. There was therefore a large element of the population from which poor children might arise. Moreover, many of the white servants were of poor stock, ignorant, lazy, and with low moral standards. Some were convict servants, those liberated from the English jails and sold as servants, or given a sentence by English judges of servitude in the colonies in lieu of a jail sentence in England.[2] The moral standards of this last class were very low, and of course there is no need to comment on the lack of moral standards of the negro slaves. There was complaint from an early date of "vagrant idle, and dissolute persons," largely recruited from the white servants. They frequently became the fathers of illegitimate children, by both free white and white servant women. They ran away, with the result that their children were often thrown on the parish for support. White men servants after their term of service might become vagabonds or dissolute persons, or, if married, desert their wives and children, who would then be thrown on the parish. Some white servant women also gave

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[1] See *School Review*, May, 1919.

[2] JAMES D. BUTLER, "British Convicts Shipped to American Colonies," *American Historical Review*, II, 12–33. See also "A Forgotten Slavery of Colonial Days," article by the author in *Harper's Monthly*, October, 1913.

birth to illegitimate mulatto children, which by the law[1] of Virginia were free after their term of service.

The problem then for Virginia, and for other colonies, was much the same as that which had confronted Old and New England, only it was a more serious and pressing one. That problem was first economic—how to protect the parish from the burden of maintaining poor children; how to provide for an artisan class skilled in trades and needed in the colony; how to reduce idleness and unemployment, and how to add rapidly to the wealth and property of all the people. The second aspect of the problem was educational. The natural conception of the relation of the state to education was largely *laissez faire*, on the theory that this was a matter to be intrusted to private initiative or the church. But the pressure of a rapidly growing class of poor children, and the consequent expense to the parish, coupled with the difficulty of obtaining the much-needed supply of artisans, forced the state to modify this conception. Poor parents could not educate their children, and some degree of book education was desirable for artisans in order that they might be efficient in their trades. Two influences also promoted this conception. The period from the Reformation to the great Civil War is marked, in England, by the stimulating effect of religion on education—especially the efforts of competing religious denominations and their anxiety to increase their power through instruction in the peculiar tenets of their creed and in their catechism. In states where there was union of Church and State—the Established Church in Virginia—this influence was strong. A second influence was the beginnings of the humanitarian movement, as exhibited in philanthropy, the desire to give poor children some opportunity for education, best illustrated in the work of the Society for the Propagation of the Gospel in Foreign Parts.[2]

[1] HENING, II, 170. A law of 1662 even complained that "Some dissolute masters have gotten their maides [white servants] with child" (Hening, II, 167).

[2] See W. W. KEMP, *The Support of Schools in Colonial New York by the Society for the Propagation of the Gospel in Foreign Parts*, New York, 1913.

All these forces led to the conception that the state was responsible, to some extent at least, for the education of certain classes of children. From an economic, religious, and humanitarian standpoint, it was undesirable that a large body of illiterate laborers, tradesmen, or farmers should be allowed to develop. From a purely selfish standpoint, the money cost, the state was compelled to take some action. As in the New England colonies, and perhaps influenced by their legislation,[1] the system of apprenticeship seemed to be the most effective agency to gain the ends desired, with the least expense, loss of time from labor, and, in the case of the southern colonies, the least interference with their general attitude toward the relation of the state to education.[2]

An examination of the legislation of Virginia reveals the fact that at least eight important laws were passed from 1646 to 1769 having for their purpose religious, industrial, or book education of poor children of various classes; that five of these acts contemplated some form of book education, and that four of them can be properly classed as compulsory laws. There were in addition general laws applying to all children and providing for compulsory religious education. An act of February, 1631/2,[3] provided that all churchwardens should take an oath administered before the commissioner of the monthly court, to the effect that they "present such maysters and mistresses as shall be delinquents in the catechisinge the youth and ignorant persons." Another act[4] of the same session provided that the minister should upon every Sunday "examine, catechise, and instruct the youth and ignorant persons of his parrish, in the ten commandments the articles

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[1] See article by author in *School Review*, December, 1918.

[2] The Virginia Company agreed February 2, 1620, that one hundred children supplied by the city of London to be sent to Virginia and apprenticed should be "Educated and brought upp in some good Craftes, Trades, or Husbandry" (Kingsbury, *Rec. of Va. Co.*, Vol. I, p. 306).

[3] HENING, I, 156.

[4] *Ibid.*, p. 157; see also *ibid.*, p. 181, for re-enactment of this law in 1632.

of the beliefe and in the Lord's prayer. . . . And all fathers, mothers, maysters and mistresses shall cause theire children, servants or apprentizes which have not learned the catachisme to come to the church" to learn the same, and if any of the above neglected their duties they should be "censured by the corts in those places holden." By the act of 1644/5[1] ministers failing to catechise every Sunday were to forfeit five hundred pounds of tobacco for the use of the parish. Finally the act of 1645/6[2] provided that all masters and families failing to send their children and servants to be catechised, upon warning given by the minister where they would officiate, were to be subject to a penalty of five hundred pounds of tobacco for the use of the parish "unless sufficient cause be shewn to the contrary."

The increase of children in Virginia was slow for the first thirty years of the settlement, but by 1646[3] "God Almighty, among many his other blessings, hath vouchsafed increase of children to this colony, who now are multiplied to a considerable number, who if instructed in good and lawful trades, may much improve the honor and reputation of the country, and noe lesse their owne good and their parents comfort." This refers, of course, not to children of wealthy planters and well-to-do farmers, but to poor children. The first three acts relating to this class were those of 1646, 1668, and 1672. They did not, strictly speaking, involve compulsory education, since the laws are permissive rather than mandatory, but they require comment in order to show the conditions accounting for the passage of later compulsory laws.

The act of 1646[4] refers to sundry laws and statutes of parliament established "for the better educateing of youth in

[1] HENING, I, 290.

[2] *Ibid.*, pp. 311–12. None of these four acts appears in the revisal of 1661/2, to be found in *ibid.*, II, 41–162, nor in later codes.

[3] *Ibid.*, I pp. 336–37.

[4] *Ibid.*, This act was omitted in the revisal of 1661/2, and later was replaced by that of 1668.

honest and profitable trades and manufactures, as also to avoyde sloath and idlenesse wherewith such young children are easily corrupted, as also for the reliefe of such parents whose poverty extends not to give them good breeding." Accordingly justices of the peace were given power to bind out poor children to tradesmen or husbandmen "to be brought up in some good and lawful calling." The remainder of the act outlines an ambitious plan for industrial education. Two children from each county, chosen by the commissioners of the counties, were to be sent to public flax houses to be taught in "cording knitting and spinning." Such children were to be taken only from those parents who "by reason of their poverty are disabled to maintaine and educate them." State and county were to provide the funds to defray the cost of buildings, food, clothing, shelter, etc., including "a sow shote of sixe months old, two laying hens," etc. The act of 1668[1] was somewhat similar. It contemplated the promotion of manufactures—wool, flax, and hemp—and the increase of artificers. It gave power to the commissioners of each county court, with the assistance of the vestries of the parishes, to build houses for "educating and instructing poore children in the knowledge of spinning, weaving and other useful occupations and trades," with power to take poor children from indigent parents to place them to work in such houses. In 1672,[2] because of the increase of "vagabonds idle and desolute persons," justices of the peace and county courts were impowered to place out *all* children whose parents were not able to bring them up appren-

[1] HENING, II, 266–67. This act remained in force until 1755 (code of 1733, p. 48) and was then superseded by the law of that year, which declared that the number of poor people had greatly increased of late years, and houses for their reception were proposed to help prevent "great mischiefs" arising from such numbers of unemployed poor. Vestries of every parish were given power to provide one or more houses, and provide cotton, hemp, or flax or other material for setting the poor to work. Parishes, if small, might unite to build houses, and were also given power "to levy a reasonable allowance in their parish levies, for the education of such poor children as shall be placed in the said house, or houses, until they shall be bound out according to law." (Hening, VI, 475–76).

[2] HENING, II, 298; also in the code of 1733, p. 57.

tices to tradesmen, males to twenty-one and females "to other necessary employments," to eighteen, and churchwardens of every parish were to be ordered by the county courts to give an account annually at the orphan's court "of all such children within their parish, as they judge to be within the said capacity."

None of these three acts specifies book education, and there is no evidence that the workhouses provided for were ever built. There was no reason, of course, why the justices could not introduce a clause into the indenture providing for book education, if they wished to, and such a practice was not uncommon from 1646 on, but we are here concerned principally with the laws which made this practice *compulsory*. With these permissive acts as a foundation, Virginia opened the eighteenth century with a law providing for compulsory book education of orphan boys, as already stated, and in 1727 this act was made applicable to poor boys apprenticed.

The act of 1727[1] complains that idle and disorderly persons able to work "strole from one county to another, neglecting to labour," and vagabonds "run from their habitations and leave either wives or children, without suitable means for their subsistance." When such parents, because of "idle dissolute and disorderly course of life," were judged by the county court to be incapable of supporting and bringing up such children, or when they neglected to "take due care of the education and instruction of such child or children, in christian principles," the churchwardens, on certificate from the county court, were given power "to bind out or put out to service or apprentice" the children of such parents, for such time and "under such covenants as hath been usual and customary, or the law directs in the case of orphan children." This last clause refers to the act of 1705 which required that in the case

[1] Hening, IV, 208–12, also in code of 1733, p. 397.

of orphan boys apprenticed, "the master of every such orphan shall be obliged to teach him to read and write."[1]

The act of 1748,[2] in force June 10, 1751, was a revision of that of 1727, with important changes respecting the education of poor children. When county courts judged that *any* person or persons were incapable of supporting and bringing up their children "in honest courses," or when it appears to the court "that he, she, or they, neglect to take due care of the education of his, her, or their child or children, and their instruction in the principles of christianity," then on order of the county court churchwardens of parishes could bind such children apprentices "in the same manner, and under such covenants and conditions as the law directs for poor orphan children." This refers to another act of 1748 passed at the same session, providing that the master of an apprenticed orphan should "teach, or cause him or her to be taught to read and write." It will be noticed that this act specifies for the first time as a reason why the court should take a child from a parent the "neglect to take due care of his education." Previous acts had mentioned lack of support, lack of ability to bring up to trades, or lack of instruction in Christian religion. This approaches the ideals of New England in the seventeenth century, and, as we shall see, there is not wanting evidence to show that parents were called to account merely for neglecting the education of their children.

ILLEGITIMATE CHILDREN

Virginia also passed laws for the education of another class of children, those of illegitimate birth. By the end of the seventeenth century there was a large number of indented servants, causing serious problems to arise respecting the main-

[1] By the act of 1736 apprentices were to serve full time until they became of age, even if apprenticed in infancy, because "skill in trades, arts and industries....would be very beneficial to such apprentices and increase the number of artificers in the colony," (HENING, IV, 482).

[2] HENING, VI, 32, (chap. xix). This act is also in the code of 1752, pp. 303–5, and that of 1769, pp. 216–18.

tenance and education of children of this class. Laws were passed as early as 1642/3[1] against the marriage of servants without the consent of their masters, against fornication between servants, and against fornication between freemen and servants. The number of illegitimate children seems to have been considerable, judging from the laws and the recorded cases in the parish records. The first act bearing on the subject was that of 1657/8,[2] requiring the father of an illegitimate child to give security to indemnify the parish against the expense of keeping the child. If the father were an indented servant, he would be unable to obey the act; hence, in 1662, another act[3] provided that the parish should "take care to keepe the child during the time of the reputed father's service by *indenture* or custome, and that after he is free the said reputed father shall make satisfaction to the parish." Thus in the indenture there might be provision for teaching the child to read. If the child were not indentured and the father died or ran away, it became a permanent charge on the parish. The only method of relieving the parish of this expense was to bind out the child as an apprentice, as was provided for in the act. The act of 1769[4] complains that the laws in force are insufficient to provide for indemnifying parishes "from the great charges frequently arising from children begotten out of lawful matrimony." It provides specifically for binding out by the churchwardens the illegitimate child of a single free white woman, in language similar to that of 1748, including this phrase: "and the master or mistress of every such apprentice shall find and provide for him or her diet, cloathes, lodging, and accommodations fit and necessary, and shall teach or cause *him* or *her* to be taught to read and write." If the illegitimate child were born of a convict servant woman during the time

[1] HENING, I, 253.
[2] *Ibid.*, I, 438.
[3] *Ibid.*, II, 168.
[4] *Ibid.*, VIII, 374–77.

of her service, because such a servant could not legally give testimony, and hence the reputed father could not be discovered, the master of such servant was obliged to maintain the child until it was twenty-one or eighteen years of age, and was entitled to its service, provided he "find or provide for such child, the like accommodations, education and freedom dues, and shall be compelled to answer his or her complaint, made to the county court, for default therein, or for ill usage, in like manner, as is before directed in the case of other apprentices."[1]

MULATTO CHILDREN

The act of 1691[2] complained that there was need of preventing "that abominable mixture and spurious issue which hereafter may increase in this dominion as well by negroes, mulattoes, and Indians intermarrying with English, or other white women, as by their unlawful accompanying with one another." A free English white woman having an illegitimate child by a negro or mulatto was subject to a fine or was sold for five years. If the woman were a servant, she was sold for the same number of years after her time as a servant had expired, and in each case the child was to be bound out until he or she should be thirty years of age. By the act of 1705[3] this was increased to thirty-one. The law of Virginia had provided as early as 1662[4] that all children "born in this country shall be held bond or free only according to the condition of their mother." A mulatto, then, born of a free white or white servant mother, was not a slave, but after the time of service expired was a free man or woman. The act of 1753[5] continued these provisions for binding out such children, but

[1] HENING, VIII, 377.
[2] *Ibid.*, III, 86–87. The same clause appears in substance in the code of 1769, p. 311, except that the word "Indians" is omitted.
[3] *Ibid.*, p. 457.
[4] *Ibid.*, II, 170. This was in force throughout the colonial period and is found in the code of 1769, p. 308.
[5] *Ibid.*, VI, 361.

up to this date no specific provision had been made for their education unless we consider the laws relating to poor children as applicable. The act of 1765[1] reduced the time of service, males to twenty-one and females to eighteen years of age, because the former age was "of unreasonable severity towards such children." Moreover, because mulattoes had been sold as slaves, a penalty of fifty pounds was imposed on the seller to be paid to the purchaser, and an additional penalty of twenty pounds to the informer. For a second offense the service of the servant was forfeited, and the latter was to be bound out to serve to twenty-one years of age "in the same manner as is by law directed for the binding out of orphan children." This would seem to indicate that provision for teaching such a boy or girl to read and write was contemplated. There were actual indentures, to be cited later, which so provided.

CONCLUSION

It is apparent that Virginia considered the education of these unfortunate classes—orphans, poor, illegitimate, and even mulatto children—to be a matter of importance, for no less than ten important laws[2] were passed involving these classes which mention specifically that the guardian or master is responsible for some book education. They provide for direct education by guardians or others for orphans with estates and for poor orphans and children through the system of apprenticeship; and those acts which do not directly mention education, or such subjects as reading or writing, do not prevent the inclusion of educational clauses in the indenture, as is proved by cases to be cited.[3] The attitude of Virginia

[1] HENING., VIII, 133–34. This act is in the code of 1769, p. 450.

[2] This does not include the acts on workhouses, those of 1646, 1668, and 1755, nor several acts relating to orphans involving the security of their estates, part of the purpose of which was to safeguard their education.

[3] It may also be noted that there was some attention to the Indians. The act of March, 1655, declared that Indian children could be taken as servants, with the consent of their parents, "Provided that due respect and care be had that they the said Indian servants be educated and brought up in the Christian religion and that covenants for such service or services to be confirmed before two justices of the peace as aforesaid" (Hening, I, 410).

toward education was evidently one which recognized that the state was responsible for the education of only those children whose parents were not likely to attend to the matter themselves. There is only one law which would allow the justices to interfere with other children than the poor, for the act of 1748 may be so interpreted. The assumption was that education was a private affair and that capable parents would voluntarily attend to the education of their own children. It will be noticed that during most of the seventeenth century Massachusetts and Connecticut made no such assumption.

It will be observed that the acts concerning orphans provide: first, for education through payment of tuition fees, in the case of those orphans whose estates produced interest on the principal sufficient for the purpose; secondly, for education through the system of apprenticeship, where orphans had a very small estate or none whatever. Although the first law mentioning book education for orphans apprenticed was that of 1705, yet the general acts of 1646 and 1672, giving power to justices of the peace to bind out poor children, would permit them to include a clause in an indenture providing for book education for an orphan bound out. A case of an apprenticed orphan with such a clause included in the indenture is recorded as early as 1648.[1] The fact that a session of the county court was called an "Orphans' Court" at this early date is evidence that the class was of some importance.

It will be noted that there is a progressive increase of orders respecting the administrative features of these laws. The purpose was to provide better methods of discovering whether an orphan was being educated to protect his estate for this purpose, to increase the degree of education, and to provide penalties for negligence. Thus guardians were to make annual reports, provide security, and see that orphans were instructed

[1] *William and Mary College Quarterly*, V, 221.

according to the proportion of their estates. Judges at first merely saw that orphans were provided for; then they were to make yearly inquiry; then they must apprentice the orphan if the estate was small, remove him from the master or guardian in case of neglect, and appoint new masters or guardians. Sheriffs also summoned guardians, and clerks of courts made public record of their accounts. Judges were obliged to see that an educational clause was inserted in the indenture, after 1705 for boys and after 1751 for girls, and could make additional rules for education in 1730. In 1679 they were chargeable for losses for their failure to take sufficient security from guardians, while in 1740 they were subject to a severe penalty for neglect of the laws respecting orphans.

A comparison of the legislation of Virginia with that of the New England colonies with respect to the compulsory education of poor children shows similarities as well as differences. The economic motives appear to be much the same; namely, the effort to avoid pauperism and idleness, and a desire to develop an artisan class. The religious and educational motives are also similar. The laws apply mainly to *special*, not to *all*, classes of children, as was the case in New England during most of the seventeenth century, and the purpose of book education is not so specifically stated. There is a failure to mention a specific money penalty, to be imposed on parents or masters or the churchwardens for negligence of the law. The classes of children involved, however, were poor and illegitimate children, and since the desire to relieve the parish of the burden of supporting such children was very strong, a money penalty was perhaps not needed in order to make it certain that they would be apprenticed. It will be remembered that not even Massachusetts imposed a money penalty on officers, except in one instance, after the laws on compulsory education were framed so as to apply only to poor children apprenticed—that is, after the act of 1703. The plan for workhouses for poor children

contemplated state, county, and parish support by taxation, though the acts are not compulsory, and only that of 1755 mentioned education directly.

It is apparent that Virginia not only recognized her responsibility for the compulsory education of the classes of children mentioned, but passed a series of notable acts designed to accomplish the purpose. While they are not so elaborate as those of the New England colonies for the seventeenth century, they are in the eighteenth century quite up to the New England standard and in some respects above it. For example, the law required that after 1751 *all* orphan and poor girls apprenticed should be taught to read and also to write. No New England colony, after 1710, required *all* girls apprenticed to be taught to read and write. The acts cited show that we may fairly assert that Virginia established a compulsory system of education for these special classes of children. The laws are mandatory, indicate the machinery for enforcement, name the responsible officers, provide penalties for negligence of parents, guardians, and masters—namely, removal of the child—and, in the case of negligent justices, provided a money penalty, or its equivalent in tobacco. The central feature of the system was the county court, composed of the justices of the peace. It was entirely responsible for the workings of the laws respecting orphans. In the case of poor and illegitimate children the churchwardens were about equally responsible with the justices. There is thus the same tendency as in New England, that of making special officers of local units the responsible persons for carrying out the law. There is also the same tendency to increase the amount of education required for boys and girls apprenticed, and to place less emphasis on religious instruction in the eighteenth as compared with the seventeenth century. We shall see from the evidence in court and parish records that these acts were enforced, to some extent at least, but how effectually or universally it is difficult to say. But this observa-

tion can be made quite as truly of the legislation of the New England colonies. Later articles will discuss the enforcement of the compulsory education laws cited, in both the New England and the southern colonies.[1]

[1] A tabular view of the compulsory laws passed by Virginia involving booke ducation follows. This may be compared with the table given for New England in the *School Review*, January, 1919, p. 42.

Date	Class of Children	Education Required
1642/3–1776..	Orphans with estates	According to the proportion of their estates and circumstances.
1705–1776....	Poor orphan boys and girls apprenticed because of little or no estate:	
	1705–1776, boys	To be taught to read and write
	1751–1776, girls	" " " " " " "
1727–1776....	Poor boys and girls apprenticed; children of parents unable to support, or who neglected to instruct them in Christian principles:	
	1727–1776, boys	" " " " " " "
	1751–1776, girls	" " " " " " "
1751–1776....	*Any child* apprenticed, because parents neglected his or her education or instruction in the principles of Christianity.	" " " " " " "
1765–1776....	Mulatto boy or girl born of a free white or servant woman and apprenticed, because sold as a slave by a master, being his second offense.	" " " " " " "
1769–1776....	Illegitimate child apprenticed, born of a single free white woman.	" " " " " " "

THE HIGH-SCHOOL FACULTY MEETING

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In the Thornton Township High School we have long been impressed with the importance of the high-school faculty meeting as a factor in effective high-school administration. As the result of considerable experimentation a systematic plan of procedure has been evolved which seems to have good results. It is the purpose of this paper to describe in general terms this plan, which is based on specific practice in the school covering a period of years.

Education is a continuous process, and the means of promoting it must necessarily be thoroughly integrated, otherwise there is an enormous waste of efficiency and effort. The same objectives of education should dominate the principal and all the teachers. They cannot so dominate the entire high-school faculty unless these objectives are discussed in the faculty meeting and concrete applications of them to the teaching in every department are thoroughly considered by the teaching body as a whole. The teacher in one department must know in detail how these objectives are attained in other departments, in order to adjust properly the work of his own department. In other words, every teacher must know thoroughly the whole process of education in order to discharge properly his own particular duties in this process. In this way the teacher will very promptly acquire the attitude of teaching students rather than subjects.

Furthermore, the high-school faculty is a social machine for the accomplishment of social results. It cannot operate unless it acquires social solidarity by cooperative study of its

problems. Unity of effort can be secured only through common consideration of common difficulties. There are certain common principles of method underlying the teaching in departments which vary widely in content and aim. A cooperative study of such topics as these will make evident the common problems existing in the various departments and will minimize departmental differences.

In order to attain the full benefit from the use of the faculty meeting to accomplish these results, it is necessary to set up a well-ordered system of attacking these various problems. The system used in Thornton Township High School will be discussed under the following heads: (*a*) administration of school routine; (*b*) constant review of the fundamental principles of secondary education; (*c*) continuous study of new movements in education; (*d*) continuous study of the proposed changes in the evolution of the school; (*e*) consideration of miscellaneous topics; (*f*) effects of this plan on the teaching body; (*g*) necessary qualifications on the part of the principal to operate the plan.

Topics *a* to *e* should be so organized that they are all kept constantly in the current thought of the members of the faculty. One after another they should be the main topics for the consideration of the faculty according to some well-defined plan. Occasionally, according to plan, one of these divisions may absorb attention for a series of meetings, but in that case a small fraction of each session may be given to the other divisions. Great care should be taken that the plan when once adopted is not thrown out of balance. Each of the divisions of the work can be handled successfully in a series of meetings interlocking with similar series covering each of the other divisions.

Failure to give large attention to the administration of school routine results in the wreck of a good many high-school programs. On the other hand, because of its fundamental

importance, many school faculties give it an amount of time which is disproportionate to the real tasks of education. Sometimes the principal secures proper attention to routine on the part of the teachers by constant conferences with them and constant work with the student body; indeed, his energy and his attention are often totally absorbed in this task. In some cases the faculty meeting is given over entirely to the consideration of this topic to the exclusion of all others.

A well-defined plan should govern the proportion of time devoted to this subject. A few meetings at the beginning of each school year should probably be devoted to a thorough exposition of the routine of the school. In these first meetings the faculty members will be made thoroughly conversant with the procedure in the organization of the school in order that they may act intelligently with reference to this matter. The daily schedule should be discussed; the time when teachers are expected to be on hand in the morning; the time when they may leave in the afternoon; the rules of the school with reference to the passing of pupils between periods; such petty details as how pupils shall be permitted to pass from teacher to teacher during their study periods; uniform procedure as to the management of the study-hall, and so forth. In the same manner the teacher should be thoroughly familiarized with the office records and with all the blanks and documents of various kinds used about the building. In fact, the entire routine of the school should be discussed so that the teachers may understand it thoroughly.

In this connection the faculty should be thoroughly indoctrinated with the idea that the utmost adherence to formal matters of school management will be insisted upon. Wherever a large number of people are working together, the machinery works with greater facility if very little opportunity for individuality is left in such matters. The teacher should understand that in these formal matters great uniformity is required in

order that wide liberty may be provided for the individuality of the teacher for the real work of education in the classroom.

In this connection the educational principles involved should be made clear to the teachers. It should be explained clearly to them that certain formal elements about the school can be made to function with greater uniformity if advantage is taken of the tendency of people to form long- and short-time habits. Habits about the school should be created with the expectation that pupils will follow certain methods during their entire school career. Certain other habits should be created with the expectation that they will last only a year or even only a part of a year. The stabilizing power of tradition should be used in this connection. Certain matters of conduct should become a tradition of the school, so that pupils may learn about them informally from each other. Pupils will also begin in the lower grades to learn what those traditions are and will comply with them on the first day of their entrance into the school.

Now, as was stated above, too much time must not be given to the creation of these formal school habits. With a new principal and a new faculty, a good many meetings might be necessary; but if principal and teachers have had considerable experience in working together, the number of meetings at the beginning of each year devoted to school routine can be reduced to a minimum. Routine matters should be explained sufficiently to enable old teachers to call them freshly to mind and thoroughly to acquaint new teachers with them. At later times during the year matters of school organization and routine can be left to go forward of their own momentum for long stretches of time. Occasionally circumstances may demand that an entire period be again devoted to this topic. Usually it can be disposed of when necessary in the first five or ten minutes of any regular faculty meeting. If the faculty thoroughly studies these matters of organization and routine as applied to the local school and faithfully executes the principles laid down, it will

have large opportunity during the school year for considering other important educational topics, to a discussion of which this paper now turns.

As soon as the school is established as a going concern, the faculty at its weekly meetings should devote many of its sessions to a study of the fundamental principles of secondary education. These principles, of course, take into view to some extent the principles of elementary education on the one hand and of collegiate education on the other. As soon as this is undertaken the principal and faculty should face the fact that they are in the presence of certain permanent principles, which, if considered in a merely formal way, will produce only indifferent results. If, furthermore, the constant study of these principles is neglected, the teaching becomes formal, the principles are forgotten, or at least lie dormant in the minds of the teachers, and the work of the school becomes largely ineffective.

In this division of the work a systematic plan of procedure covering the field should be outlined. A list may be made of those principles which it seems advisable to study during the year; for example, general objectives of secondary education; permanency of learning as applied to daily tests and a system of reviews; individual differences among students; drill; problem-solving, and the like. It is desirable that some of the chief principles be touched upon at least once each year. Best results seem to be attained by taking up a topic such as "problem-solving" for a meeting or a series of meetings. After a fundamental principle has been studied intensively it need not be considered again for a considerable time. However, such a principle as "problem-solving" should periodically come up for a brief review and new applications. After a period of two or three years, when perhaps the high-school faculty has changed its constituency somewhat, the topic

should again be treated exhaustively, but from a fresh point of view and in a new manner.

In the making of an intensive study of one of these topics, experience shows that it is advisable in the first place to review some of the literature on the topic; then to devote a major part of the time to a concrete study of the topic as it is applied in the various departments. As time allows, each department should make its particular contribution to this topic. At the same time each department should generalize its experience and show how the same principle is applicable in the other departments. In this way the faculty comes to have a more perfect idea of the unity of all educational effort in the institution.

In this connection it may be said that teachers should be encouraged to take a broad view of their responsibilities. They should be encouraged to read throughout the year one or two books and one or two magazines on the work of their particular departments. In addition to this they should read one or two magazines and one or more books on the more general topics of education. It should be made clear that a departmental teacher, who is entirely absorbed in the technique of his own department and who does not have a good comprehension of general problems and aims of education, is not effective in his own department.

The method of carrying on faculty meetings for the consideration of fundamental principles may be varied. Sometimes a teacher may be assigned to read a chapter from a book on secondary education in preparation for a study of the principle involved. Often the principal himself may review the leading considerations applying to the topic which is to be discussed. Teachers may be asked before the meeting to present concrete examples and illustrations of the topic in hand taken from the daily work of their departments. Very often the discussions may be held more to the point and be more sug-

gestive if a brief outline of the proposed topic is placed in the hands of the teachers before the meeting in which it is to be considered. A series of preliminary interviews with teachers who are to contribute to a topic gives definiteness to a discussion. After the meeting has been held, a mimeographed summary of it in the hands of all concerned is valuable in giving permanence and continuity to the work and in providing means of reference.

In a discussion of the matter of fundamental principles in secondary education definite provision should be made for the consideration of new movements in education as a separate enterprise. Constant changes are going on in the field of education. It is the business of the high-school faculty to keep in close touch with these movements. In the first place, because the new movements are often nothing more than a revaluation or a new view of old educational processes, the old aims and educational methods may be made more fertile by a study of these new movements. An example of this is the recent movement in the direction of vocational education. A high-school faculty, when studying this topic thoroughly, learns the reasons for the growth of the movement and its aims. It also learns in what respects the movement is vague and ill directed. After a teaching staff has studied the movement carefully, the old studies may be revalued to determine in what respects they comply with the objectives of the new movements. By this process it is also possible to discover in what way the teaching of the old subjects may be modified to meet the new objectives. Similarly the faculty can also become acquainted with changes which ought to be made in the curriculum. This is a valuable process even though the school is not able to adapt itself completely to the demands of the new movement.

In the second place, the high-school faculty should keep abreast of newer movements in education in order that the best features may be incorporated into the life of the school at an

appropriate time. If the faculty is thoroughly conversant with a new movement and the proper relations of the local school to it, whatever action is taken with reference to it will be intelligently understood by the entire school community, pupils and parents alike. The faculty can thus guard against certain dangers with regard to new movements. At this point it is clear that the school ought not to incorporate too many of the new movements at one time. A school organization can assimilate to advantage only a certain amount at one time. Furthermore, it is sometimes destructive to take new movements into the life of the school in their experimental stages. Such new movements can best be adopted only when the disturbing effects of their immature features have been carefully weighted and provided for and their advantages have been properly evaluated. Otherwise it is best to wait until the movement in question has attained maturity in order that it may be properly assimilated into the life of the school. Supervised study is an example of the hasty adoption of a new method of school administration. Scores of schools have undertaken this enterprise without having adequately studied it. The junior high school, although it has won merited success in many quarters, has failed in others because it was not adequately understood before it was adopted as a part of the local educational policy. The high-school faculty should make a constant study of these new movements with the requirements of the local school in mind. In this way the school may be thoroughly abreast of the times and yet do nothing that would radically interfere with the proper development of the local system.

The continuous study of proposed changes in the conduct and organization of the local school as a division of cooperative study on the part of the faculty, while closely related to the preceding subject, should not be confused with it. Any forward-looking educational movement should be a matter of

study on the part of the faculty for reasons stated above. If, however, the policy of the school itself is to be changed in the near future in any important particular, then the movement should have an intensive and detailed study not otherwise imperative. The principal should make a thorough study of the matter in its larger aspects. If the proposal be one of outstanding importance, it should be discussed with the board of education and perhaps with influential members of the local population. The teachers immediately concerned in it should make the most detailed study of all. Of the new movements the faculty as a whole should make a study, extensive and intensive. If this is done in an adequate manner the new department or the new policy will at once become a corporate part of the organization and should be a success from the beginning. For example, if a system of excess credits is to be introduced with the opening of a new school year, the faculty should be studying the matter thoroughly in a series of meetings in the preceding year. The principal will fully inform himself and explain to the faculty the effect of such a policy upon the requirements for graduation, and the possible effects of such a course of action in stimulating more intensive study among better students. He will discuss the advisability of fractional credits for the partial performance of the required amount of work for passing. He will consider and explain the possible effect of granting partial and excess credits upon pupils attempting to enter college. The teachers will need to examine anew the distribution of grades in their various classes, and to consider whether or not too large a portion will be receiving credit for work done. Any other new movement in education might be treated in the same way.

As indicated above, a systematic plan should be outlined for taking care of the routine of the school, for consideration of fundamental principles, the study of new movements in general, and new movements as applied to the local school. This

systematic plan should not be followed so rigidly, however, as to exclude the consideration of miscellaneous topics which various occasions may provide. For example, certain topics may have been discussed in a recent teachers' convention. The plan on which faculty meetings are conducted should provide an opportunity for the review of such discussions while the subject-matter is fresh in mind, no matter what part of the scheme for conducting the faculty meeting may be current. A significant article may appear in one of the educational magazines which may demand the attention of the faculty. An important experiment may have been recently conducted, to which the faculty should give attention. Possibly a significant device or method has been adopted by one of the school departments, with which the whole school should be made familiar. Perhaps some member of the faculty, having had opportunity to visit other schools, has secured valuable suggestions which it may be advisable to present in the faculty meeting. Incidental opportunities of this sort should be taken full advantage of. Although the topics which they treat may belong at some other point in the year's work of the faculty, they should be given to the faculty at once in order that full advantage of their recency may be taken.

The obvious effect of this plan is to keep the faculty, teachers and principal alike, alert in the whole field of education. The fact that it is a stimulus to the teachers is shown by the comments given below taken from a series of statements made by teachers in Thornton Township High School when asked rather abruptly one day to write for five or ten minutes suggestions as to the topics they considered most valuable for consideration in future faculty meetings:

"Topics along advanced educational lines have always been very helpful to me, and I should like to have them continued."

"Continue the discussion of the education of the masses to prevent social unrest."

"One meeting for discussion of extension activities of the high school. How best to reach the people of the community outside of school hours."

"Some possibility of grading pupils so that in teaching a class one will not weary some and talk over the heads of others. The time element for classes at present seems to make this impossible. I should like to have worked out a scheme for pupils according to various grades of intelligence. The supervised-study method would work far more effectively under these conditions."

"I should like to hear a further discussion by the different departments of what they are doing. I think we can often control our work to better advantage if we know what others are doing."

"I am interested in the discussion of such topics as have been considered lately; e.g., initiative and problem-solving. I should be glad to have the discussion of these and related topics continued."

"I like especially well the reports of state and national conventions—when these occur."

"So far as my department is concerned, I should like to have the subject of physical education considered in its proper relation to the other subjects in the curriculum. It seems to me it should be regarded as coordinate with the rest in respect to credit, time allotted, and so forth."

"Would the 6-6 plan or the 6-3-3 plan, such as is becoming so popular in Iowa, be applicable to a community of this kind?"

"Discussion of supervised study period."

"I would like to know what topics other departments would like the mathematics department to emphasize in its teaching. I might find this out by personal conference."

"When classes such as Miss . . . . and mine are divided, just what credit should be given the work of the poor class so as to avoid A and B students feeling that it is much less difficult to get credit in such a class? That is, not to favor poor work. Or what should be the standard of credit for the poor class? I think it should be the same in all the school, but just what should it be?

"In the interest of the correlation of the Latin department with others in the school, I should like to hear in particular from the English, history, and science departments *definite* and *concrete* suggestions of ways in which the Latin department may correlate with those to the further benefit (and interest) of the pupils."

"Right now, the appreciation which the *majority* of people have for better forms of entertainment, particularly the drama—or more particularly

the theater—the movies, etc., is at a very low ebb. The growth of that appreciation must be emphasized much more strongly in all social functions in the school—as well as bringing more of this broader appreciation into the various departments."

"The first thing that occurs to me is that it would be of interest and profit for representatives of different departments to tell *specifically what* they do. I do not mean to discuss this technically or psychologically or theoretically, but practically as the work is carried on *here*. I believe we live within our *own* subject and its limitations too much; this would surely broaden us. We all know vaguely what each department does, but not many know specifically. This is my opinion only."

"My suggestions are all comments. Teachers' meetings have been very beneficial. I like for you to keep us informed on up-to-date problems in education and new literature on these problems. General criticism of the teachers and ways of co-operation are in order. I like your method of outlining the meeting so that they are definite and for a clear purpose. I think teachers should not be permitted to 'ramble' in teachers' meeting without previous preparation."

"Mr. . . . . , I have wanted to say this for some time; you know that men and women *never* grow up, and the compulsory phase is as distasteful to them as to the child. In this relationship you are the teacher and we the students, as it were. The same attitude prevails, I believe the same things are *said* of the 'class hour.' There are *many* things of interest and importance to be said and discussed in these meetings. Why not hold the meetings necessary to the proper conducting of the school, and then *after* the time consumed for such business, or else at entirely different sessions, announce that any who do not care to stay may *freely* go."

It is apparent from the foregoing comments that the teachers are interested in a wide variety of educational topics. It is also apparent that they receive benefit from a cooperative study of educational topics. It is also apparent that these subjects can all be formulated into a systematic scheme as outlined in the first part of this paper. Undoubtedly there are some teachers who would be too indolent to secure much benefit even from the most stimulating faculty study; but, since the whole project is designed for the maintenance and increase of efficiency of the faculty while in service, attendance and par-

ticipation in such a project should be insisted upon. It is, of course, apparent that such a project will not succeed unless carefully planned and efficiently executed.

A word should also be said as to the necessary qualifications of the principal who is to carry on such a project. He must give up ideas of maintaining himself in his position by becoming a member of numerous community organizations and by participating in many sorts of community enterprise. Of course his position demands that he shall make adequate provision for a proper community life. He must, however, be primarily devoted to educational aims and must practically allow all his energy to be absorbed in the scientific study of educational problems. His vision must be fixed upon forward-looking school enterprises. Otherwise he cannot provide the proper background for such a program as is proposed above.

The final phase in the consideration of the subject of this paper is a summary of the defects now existing in the typical high-school faculty, which it is the purpose of the plan here described to correct or at least to ameliorate.

A consideration of these defects and the proposed remedy for them, as well as any pertinent discussion of the function of the high-school faculty, must revert to the fundamental design of secondary education. Secondary education is primarily designed to initiate young people into a competent understanding of the civilization in which they have been reared as children and to prepare them for intelligent participation in it as adults. In recent years this general aim has been analyzed with increasing definiteness into a series of distinct and yet interlocking objectives; namely, health, command of fundamental processes, worthy home membership, vocation, citizenship, worthy use of leisure, and ethical character.

The American public-school faculty is poorly organized to attain the aims of secondary education mentioned above, either in its general or in its more specialized aspects. This is due to

the fact that the great variety of personalities and functions involved are not properly integrated. In the first place, departmental specialization tends to immerse the attention of the teachers in the complexities of subject-matter to the neglect of essential goals. The reorganization of the faculty on the basis of the cardinal principles[1] of education, rather than on the basis of departmental specialties as at present, would undoubtedly be an improvement, but it would still leave the teacher with an inordinate degree of departmental bias. A second important factor in preventing a full realization of the aims of secondary education is the fact that contributions which the various departments actually make toward these aims are not concretely analyzed and hence are not recognized nor fully developed for the benefit of the other departments. Each department could make its own contribution with more intelligence and greater efficiency if it were fully cognizant of the contributions being made or to be made by other departments. A third factor in preventing high-school teachers from maintaining an interest in general school policy is the fact that the high-school faculty does not participate in local school legislation and, consequently, does not secure the benefit of the larger outlook which such participation affords. The legislative functions reside entirely in the board of education. These legislative functions are affected by many social influences in the community and by the recommendations of the executive department of the high school. The executive department gets this training, but the teaching departments do not. The three difficulties just mentioned which stand in the way of educational unity culminate in a fourth. The teaching departments do not study intensively matters of general educational policy as a fundamental duty. On the other hand, the executive

[1] *Cardinal Principles of Secondary Education*, p. 27. Bulletin 1918, No. 35, Bureau of Education.

department of the high school is held responsible for an educational policy which in its larger aspects must be approved by the board of education and in its minor aspects receive its tacit consent.

However complete the educational policy of a school, it becomes effective in the life of the pupils only through the instrumentality of the teaching departments. It is at this point that the greatest difficulty arises because of the wide gap existing between the executive and teaching departments. Both principals and teachers often fail to recognize the importance of attempting to bridge this gap.

These separatist tendencies must be eliminated so far as possible; unity of aims must be established; a coordination of activities brought about and a constant stimulus and occasion for professional improvement provided for the teaching body. Experience shows that this can be accomplished in large measure by a cooperative study of secondary-school problems in the high-school faculty meeting by means of the plan outlined above. Instruction becomes far more effective if teachers can make significant contributions to general school policy and thereby become keen thinkers in the field of educational aims. School policy itself becomes more nearly adequate if the executive department makes complete use of the resources of the teaching departments.

CONCRETE GEOMETRY IN THE JUNIOR HIGH SCHOOL

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One of the results which will naturally follow the movement to revise the curriculum of the secondary school will be that such studies as mathematics and foreign languages will be thrown into the elective group. It will no longer be required for graduation from a secondary school that a pupil shall have taken geometry of the demonstration type, ancient or modern foreign languages, and possibly other courses. This is inevitable if the various demands for economy in learning, especially in the last three years of the secondary school, are realized and fulfilled.

Rugg and Clark, in their monograph entitled *Scientific Method in the Reconstruction of Ninth-Grade Mathematics*, make this significant statement:

> The point of view that will be taken throughout this discussion is that ninth-grade mathematics will certainly come to be regarded by schoolmen in our generation as the last year of mathematics that will be required. There are marked evidences of the tendency to lead mathematical instruction through a reorganized intermediate school mathematics into a last-year required course in the ninth grade.

Another result from such a revision of the curriculum will be that much of great cultural value will be lost to the student who, through inadequate guidance, fails to choose such courses as those mentioned. Those students who do not study the mathematics of the secondary school, as now provided, will not get a very adequate notion of space relations and their importance to our present civilization. Their outlook upon

life will be just so much narrower. Their appreciation of the value to mankind of the simplest applied mathematics will be vastly less than it should be to enable them to understand that phase of human activity.

Since the beginning of the secondary-school period is now considered to be properly placed at the seventh grade, still other problems have arisen. Prominent among these is the question of what shall be the mathematics in the seventh and eighth grades, or, as they are generally called, the first two years of the junior high school. It is important, therefore, to provide a good course in mathematics for the seventh, eighth, and ninth grades, without a great amount of repetition and a consequent lack of interest on the part of the pupils.

Now the essential aim of the junior high school is to give pupils of these grades a broad general view of life. The state of development of pupils in these years demands such an aim, and the fact that in the senior high school they must begin to specialize makes this aim doubly imperative. During the years of the junior high school the various curricula should furnish subject-matter that will show to the pupils the modern world in all its most important aspects. In other words, the experience of the pupil must reach out into other fields than those which he has explored during the first six years of his course.

Concrete geometry aims to furnish the student with a definite set of notions regarding space relations, with reference to those applications of geometry which are a part of his immediate environment. By means of measurement, construction, estimating, designing, observation, and appreciation the field of applied geometry is studied. A great deal of manipulation of the truths of geometry is secured in this way. But the aim is primarily to teach the subject by so presenting it that the pupils are enabled to sense the various facts, thus becoming thoroughly familiar with the various relations of

magnitudes and understanding the importance of space relations in their environment. This is another attempt to apply that generally accepted principle of learning by doing. It is also an excellent example of the belief that art should precede science in all studies of the curriculum, especially during the junior-high-school period.

A course in concrete geometry to satisfy such aims and demands is taught in the seventh grade in the training school of the State Normal School at Oshkosh. The purpose of this article is to outline the content and method of presenting this subject to children of the seventh school year. It is evident that the subject-matter of such a course must have a definite appeal to children of this age. It must be really concrete and must be studied from the standpoint of the pupil and his power to understand.

The subject-matter consists of not more than one-fourth of the propositions of Euclid as found in any standard high-school text on this subject. One of the foremost writers on the teaching of geometry[1] is authority for the statement that "Not more than twenty-five per cent of propositions have any genuine application outside of Geometry." Such propositions as the following are evidently the ones upon which we base a great deal of our measurement, construction, and design: most of the propositions having to do with triangles; all of the construction propositions, such as the bisection of an angle, the construction of an angle equal to a given angle, constructing circles in triangles and around triangles, drawing circles through three points not in a straight line, tangents to circles; similarity of triangles; all propositions dealing with areas; construction of all kinds of figures; problems dealing with symmetry; and a few of the propositions in solid geometry dealing with volumes and surfaces of solids. Such subject-matter as this furnishes a basis only. Any attempt to prove

[1] David Eugene Smith, *The Teaching of Geometry*, p. 74

these propositions by logical proof on the part of children of the seventh grade would be impossible. For this reason, these propositions must be elaborated into a series of concrete problems which are within the experience of children of the seventh grade, and so chosen that the children can solve them with increasing ability, and of such a nature that they can gain from their study the results which have been named as the aim in the study of concrete geometry.

Practically every book on plane geometry which has been published since the year 1910 has made considerable use of the type of problem which we have just mentioned. These problems consist of designs, applications of subject-matter of plane geometry, and a little graphical representation of geometrical truths, but the quantity of this material has been so greatly subordinated to the standard propositions that any attempt to use such texts as a basis for a course in concrete geometry would be impossible. Certain types of work which are vitally necessary in any seventh-grade course are entirely lacking.

The course now being taught at Oshkosh makes a great deal of use of problems involving the measurement of rooms, grounds, walks, and all kinds of rectilinear areas to accustom children to the importance of measurement. In the same way there are introduced the measurement of angles, the construction of areas, angles, and figures of all kinds as found in buildings and construction work of all sorts, designs of wall-paper, linoleums, flooring, and forms of architecture where designs are applied.

The subject-matter is divided into three groups: first, those types of problems which are used to teach the use of any particular kind of instrument, such as the pupils need to use in order to do quick and accurate work; second, those problems which the teacher introduces for the sake of teaching new geometrical truths, together with sufficient additional problems along the same general line to make sure that such a geometri-

cal truth becomes fixed; third, those problems which the children originate and bring into class for solution by their classmates. In the early part of the course the problems of the first and second groups predominate in number, but as the course proceeds the problems suggested by the class become so numerous that pupils furnish a large part of their own problems for solution and those almost invariably of a difficulty entirely sufficient.

The following list includes nearly all of the truths of geometry taught in the seventh grade:

1. Meaning represented by such terms as horizontal, vertical, perpendicular, oblique, bisect, trisect, locus of a point.

2. Study of angles—right, acute, obtuse—also their unit of measurement.

3. Study of triangles—right, scalene, isosceles, equilateral, obtuse.

4. Study of quadrilaterals, such as rectangle, parallelogram, square, rhombus, rhomboid, trapezoid, including all facts about each one.

5. Regular polygons—all the facts, such as names, angles, and sides.

6. Circles—facts, center, radius, circumference, diameter, arc, sector, segment.

7. Equality, construction, and use of triangles of all types.

8. Construction problems—angle, triangle, square, rectangle, regular polygons, perpendicular bisector of a line, perpendicular to a line, line parallel to another line, circle in a triangle, circle around a triangle, polygon in a circle, polygon around a circle.

9. Problems dealing with areas of triangles, quadrilaterals, polygons, circles.

10. Problems dealing with tangents to a circle, chords of a circle.

11. Problems employing angles measured by degrees.

12. Problems of symmetry.

13. Problems employing ratio and proportion.

14. Problems employing graphical method of representing geometrical and other truths.

15. Problems involving measurement, dealing with lines or surfaces or solids, including volumes.

The method of teaching geometry depends upon drawing, paper-cutting, the use of instruments outdoors, and observation. To secure the best results a great many figures must be constructed neatly and accurately. In order to accomplish this result it has been found necessary to provide each pupil with the following instruments: a drawing-board, T square, two right triangles—one 45, the other 30–60—a ruler, compass, pencil, protractor, colored crayons, and scissors. The entire equipment of each pupil is not expensive and has been found to save the desks from damage due to the use of sharp-pointed compasses. The teacher has a pair of blackboard compasses, a straight-edge ruler, a yardstick, and a blackboard protractor. Plain paper, ruled paper, and squared paper have been found necessary, although but little of the squared paper is needed. Most of the drawings are made upon plain paper, some of it arithmetic paper, some of a better grade. All the drawings are kept in an envelope to prevent loss and soiling.

The children learn the use of the drawing-board, T square, and one right triangle, preferably the 30–60, by drawing to scale the floor plan of their schoolroom and similar rectilinear figures. Actual measurements are made of the schoolroom; the class determines the scale to be used and then receives instructions on how to use the simple instruments. Similar problems are suggested by the teacher, such as drawing to scale the window, top of the desk, blackboard, comparing the window space with the floor space to see if the room is properly lighted; then additional problems are requested from the children, such as designs for brick walks, checker boards, concrete sidewalks,

and other pieces of construction which employ rectangles. Enough of these figures are executed on the drawing-board to make children perfectly familiar with the use of the T square and the triangle. It has been found necessary to give a large number of problems of this simple kind so that the class will surely understand how to handle these instruments. Each of the other instruments is taught in succession, and a sufficient number of problems involving the use of each instrument is introduced to make sure that the pupils can handle each instrument perfectly. From the beginning the class works from directions written upon the board. At first the teacher gives all of these directions, stating carefully what the pupils are to do, what instruments they will employ, and what scale they will use. After the novelty has passed, the children gradually begin to make their own directions for solving a given problem and also determine their own scales. These directions are written upon the board, and the class solves this problem according to its own directions. None of these directions is written upon the paper on which the drawings are made; the only statement appearing there is the statement of the problem, and accompanying it the drawing which solves the problem.

Closely related to this method of developing power to analyze geometrical problems is the optional outside work, which includes observation and invention of problems. Such observation on the part of pupils at home, on the street, in public and private buildings, leads naturally to pupils' original problems for class solution. The brighter pupils are first encouraged to bring in such problems based upon their observation, giving full directions for their solution, and after the problems are worked out by other members of the class, they are expected to show their solution of the problem. Pupils of this grade imitate very easily and very quickly, and a large number of drawings of figures which are not studied regularly in the class period are posted about the room. These give opportunity

for the brighter pupils to do more work in analyzing figures, determining the scale used, and reproducing these figures or making improvements upon them according to their own ideas. Such optional work inside the classroom makes it possible for the teacher to devote considerable time to those who need individual attention at the same time that it provides plenty of work for the more able part of the class. The results from this method are extremely worth while.

Problems involving the use of the compasses are introduced into the course by means of simple work in making semicircles and arcs of circles of all kinds as applied in ornamental design. At first these designs make use of circles only. Gradually other figures are introduced with the circles, so that triangles, squares, and other polygons form the basis of a design which is constructed by means of T square, triangles, and compasses, and the work at the same time is properly motivated.

Problems which make use of the protractor are next introduced. They involve the measurement of angles of various kinds which may be drawn at the direction of the teacher, or the angles upon any given map, of the city or of the state or of the country, may be measured and results compared. Problems in construction work, depending upon the protractor as an instrument, are then taught by construction of figures such as stars of various numbers of points, angles equal to given angles, and problems of like nature, so that the pupils become thoroughly familiar with this use of the protractor. The protractor also comes into play in a great deal of the surveying which is done outdoors.

Certain important things are demanded of each pupil from the start: accuracy, neatness, spacing upon the page, and good lines. These demands can be met only by the use of the simple instruments which have been named. In no other way could a large number of figures of all sorts be drawn accurately and neatly.

The class is taught in the beginning somewhat as follows: The teacher first tells the class members briefly what they are to do—that is, the problem for the day and in general how they will accomplish the solution of the problem. Emphasis is laid upon the necessity of understanding what they are to do before they do anything. Clear, full, and simple directions, placed upon the blackboard, are given at first. The teacher then draws upon the blackboard a figure which illustrates the problem under discussion and employs the instrument with which the pupils are to become familiar. Then the class constructs the figure, while the teacher works with individual pupils to secure carefulness and accuracy in the construction work. There are so many apparently unimportant things which must be done by each pupil in order to secure the best results that from the start the teacher is under the necessity of watching each member of the class to see that these little things are properly attended to. Some of these are: keeping the T square close to the left edge of the drawing-board, holding the compasses properly, placing the protractor at the right point for measuring or constructing angles. In brief, the little details which make the difference between accuracy and inaccuracy must be carefully taught, and the children must be so habituated to them that early in the course they invariably make good figures. The importance of this is realized when it is understood that children see things exactly as they are. It is impossible for them to understand that any angle, line, or figure may be considered as anything other than it is. None of the suppositions possible in plan geometry of the demonstration type is at all possible in concrete geometry. Therefore the figure illustrating the problem under discussion must be drawn with as much exactness and nicety as is within the power of the children to accomplish.

As soon as the instruments have been carefully taught and can be handled with ease, the members of the class are divided

into groups of not over six, each with a captain, and these groups are sent about town to observe various forms of geometry as seen upon public and private buildings in the course of the outdoor trip. Each party must make careful sketches in a small notebook, estimate measurements, and secure sufficient data about the designs and other applications of geometry which they have seen to be able during subsequent periods to make accurate drawings in the schoolroom to scale. Such outside observation, carefully organized, with its purpose understood before the children undertake it, produces excellent results. In the first place, better designs are made upon the drawing-board, and a better appreciation is felt for the every-day occurrence of geometrical forms. Another result from these trips is the presentation of new problems involving considerable thought in their solution. The question arises: How shall we draw accurately to scale the design of a window, a door, an ornamental gateway, the arch upon a belfry, and similar problems?

Another form of outdoor trip which is used to teach the value of angles, accuracy in measurement of angles, boundaries, and the like makes use of the simple tripod transit or plane table, such as is described in various boys' books having to do with elementary surveying. This transit makes use of a protractor for measuring angles, and by its use the pupils are taught the vital need of accuracy in laying out angles in city lots, city blocks, and wherever land measurements are concerned. These simple field surveys are carried out in the same way as the observation trips mentioned before. Each party has a captain, and each one in the party has an opportunity to measure angles and to use the fifty-foot tape to get distances. Each pupil in a party makes an accurate drawing to scale from the field notes thus taken.

A strictly logical method of presenting the subject-matter is not found necessary, but rather the reverse is true. A great

many geometrical forms are taught in their simplest forms and are brought up again and again in combination with other forms; hence the ability to handle those previously learned is made use of continually. Thus the proper gradation of subject-matter is secured. The application of geometry to all sorts of designs for interior decoration, floors, linoleums, wall-paper, and the like, as well as the same applications in architecture, furnishes the basis of this constant review of figures already learned. The value of such material lies chiefly in the fact that it broadens the appreciation of the pupil for the applications of geometry. It also causes a great deal of well-motivated work in mechanical execution.

Every possible source is used which supplies material of any sort which is likely to come within the experience of the child. This includes the study of maps to learn the value of accurate surveys—furnishing another reason for exactness in drawing angles, whether in laying out small lots of land or immense tracts comprising the area of an entire state.

Drawing to scale is a large and necessary part of all the work. Every outdoor problem must be reduced to a scale drawing. Every indoor problem likewise and more than one-third of the entire course make use of this method of representing figures of all sorts upon paper. This extended use of drawing to scale is extremely valuable because very little of such work has been done, and the training in the use of drawing to scale and the accurate reading of drawings to scale form a necessary part of any person's education. This work leads naturally to the consideration of proportion, a subject which is greatly neglected in the study of mathematics. Proportion is used in dealing with similar triangles, and these form the basis of considerable study in outdoor measurements of heights and distances. The ability to solve simple problems in proportion grows naturally out of the work with similar triangles and is within the grasp of the seventh-grade child.

The value to any pupil of the knowledge required in solving simple equations of the proportion type is not to be overestimated. There are so many instruments used to determine distances which employ similar triangles that it is very easy to interest children in this subject, and by that means to secure for them a mastery of it at a sufficiently early stage in their development to give proportion no terrors for them. Both in algebra and in geometry of the traditional type, proportion has held a place altogether too insignificant. Rugg and Clark ask, "Is there anything more fundamental to give a student in high-school mathematics than a clear grasp of the vital principle of variation, of proportionality, of functionality?"

A group of pupils requires for outdoor use quite a number of simple instruments used in measuring heights and distances and laying off and measuring angles. All these instruments are made in the class in manual training. They include the tripod transit mentioned above, wooden angles of various kinds, stakes, rods, and similar articles necessary for carrying out the simple but accurate survey of small lots of land. This kind of manual-training project is always extremely well done because there is a motive behind its construction. Similarly, whatever color schemes are introduced in the course of reproducing designs or inventing new designs are secured from the drawing department. In this way the children learn the interrelationship between correct color and correct design so that they understand them to go hand in hand. The extent to which this phase of geometry can be carried depends entirely upon the teacher. Design, color scheme, and application find their place in manual training, in drawing, and in sewing. As illustrations of this statement: checker boards are made in the manual-training class from designs furnished by the concrete-geometry class with color schemes secured from the drawing department; calendars are designed mechanically in the concrete-geometry class and colored in the drawing class; de-

signs originate in the geometry class for use on a simple table runner, the color scheme coming from the drawing department, and the embroidering being done in the sewing department; a design for making a curtain with stick printing originates in the geometry class, but the sticks are made in the manual-training department and the coloring of the material is done in the drawing class, where the color scheme originated.

The tripod transit may be made in the class in manual training, or a substantial wooden tripod may be purchased from any dealer in photographic supplies. A plumb bob can be secured from a local hardware store and attached to the underside of the tripod head. Then a piece of board approximately eleven inches by fourteen inches is fastened upon the tripod head so that the center of the board is over the center of the tripod head. A small pin is set into the center of this larger board. If this tripod transit is set up level at the vertex of an angle to be measured in the field, the plumb bob should be placed at the vertex of this angle.

This transit may be varied in a number of ways. It may be used with pins only, and the angle may be found by sticking pins into the board. Another way of securing the angles is by the use of the semicircular protractor placed upon the board with its center against the pin. Still a third way is to secure a circular protractor, fasten it securely upon the board, correctly centered, and then place a wooden pointer upon this circular protractor with one end at the center. Any of these methods will give good results.

A sighting-stick consists of a rod at least six feet long, with a short piece screwed to this rod so that it can be adjusted at any given angle. This is used for quickly estimating distances and heights where it is important to give these measurements or to teach the possibility of getting such measurements without the use of more expensive instruments. In the same way triangles of wood of the equilateral and

isosceles types are constructed and are used in the same manner in the field for the same purpose.

It is to be understood that none of these instruments is original; they have been in use for centuries, and some of them are in use even down to the present time in some form, but their use actually to study geometry in its first-hand applications, to appreciate its significance, has never been attempted to any extent in the lower grades of the secondary school. This is the phase of concrete geometry as taught in the seventh grade which is significant, because it teaches children that the world depends upon geometry as applied in all of these phases which they have studied outdoors. A prominent place is given in the course to the construction of various forms of graphs. These figures are introduced as soon as cross-section paper has been used to any extent, and the class soon learns how to make graphs of its own ability in the different daily subjects, besides making graphs of attendance, variations in temperature in connection with elementary science, and a few important facts for use in history classes. There is no attempt made to solve equations by the graphical method, for the familiarity which the pupils have in the seventh grade with graphical representation makes it possible to use the graph successfully in the algebra of the following year. In addition to the construction of graphs, considerable practice is had in reading and interpreting graphs of all kinds.

There is some work done in experimenting with various figures. For example, the rigidity of the triangle is tested by forming a triangle of three boards nailed together. The strength of this arrangement is compared with that secured by nailing four boards together to form a parallelogram. The triangle is also compared with other forms experimentally, and its importance in construction is definitely brought out. Examples of the use of those different types of construction and comparison between the types to determine which is the most

serviceable and which furnishes the greatest strength are secured by trips of observation. Bridge construction, trusses of all kinds, supports for telephone cross-arms, and similar uses of rods to form triangles teach the class the importance of this geometrical form. By experiment and by observation the value of different forms is thoroughly understood.

Design holds a large place in the course and consists of a series of problems which deal with useful and ornamental articles which boys and girls can easily make. In the beginning simple designs are taught and variations of them are suggested. A few simple color schemes are introduced. Home study of design is encouraged, and pupils are urged to bring to the class sketches of such designs as they find in their homes which have not been studied in class. The girls are urged particularly to design such things as can be useful in the home, such as table runners, pillow covers, curtains, and other ornamental and useful articles of like nature. The boys are urged to design articles which they can make or to furnish designs of articles which the girls can make. The use of all of the mechanical instruments is brought into play, and the proper spacing of different figures in geometry is studied by comparison with good designs seen at home and in the schoolroom. Criticism of the designs furnished by different pupils takes place in the class and is secured by comparison with good design as furnished in standard designs found in all sorts of wall-papers, linoleums, curtain patterns, and things of like nature.

A section of geometry which furnishes a constant, varied, and well-motivated quantity of material is the study of arches. The study of arches from the simplest to the most complicated type begins in the outdoor observation trips, when sketches are made freehand of arches as found upon various buildings observed by the class, and the method of construction of the various types is then studied in the class. These figures, which apparently are very simple in construction, furnish a great

deal of work in bisection of lines, location of centers of arcs, formation of correct angles for the bases of arcs, and in general train the children to understand what lies behind the structure of these simple curves. Once more the importance of the triangle is brought to the attention of the class because so many arches are formed upon the triangle as a basis. If the locality is not favorable for the study of arches as found in public and private buildings, pictures of the famous cathedrals and other public and private buildings of the world furnish a wealth of material for the study of this type of geometry.

Rose windows, such as are found in every cathedral, furnish another excellent series of problems for study because of the variety of operations necessary before the design is completed. Here again pictures may be made the basis of such study, provided local conditions do not present any examples. While this subject has to do almost entirely with the circle, there enters into the construction of rose-window designs a great many of the fundamental truths of geometry, the chief among these being angles, bisection of lines, concentric circles, and other similar fundamental truths. In such work the immense value of some truths which have not been apparent previously is fully brought out. Here again color schemes are needed, and at one more point is drawing correlated with mathematics.

The content outlined in this article is very evidently such as every well-educated member of society feels is a necessity. Every item of subject-matter is tested in this way, and its place in the course determined by this standard as a measure. The appreciation of environment is one of the definite results of this course, as is shown by the fact that many of the pupils say, "I see geometry everywhere." Probably the greatest criticism that has been made of the traditional course in plane geometry in the secondary school has been that it had no functional bearing in the education of the child. This is proved by the fact that many teachers studying the course in the teaching

of concrete geometry in the seventh grade have remarked that they never had previously appreciated the applications of geometry in everyday life. It is evident, then, that this kind of subject-matter is peculiarly fitted to a course in the junior high school, and, if carefully taught to a large number of seventh-grade pupils, will have an important effect upon the succeeding generations, because it supplies an element in education which has hitherto been greatly lacking.

A summary of the results obtained is interesting. One result of a general nature has been mentioned: that is, the appreciation of the universal prevalence of geometry in the environment. Another result equally valuable is that boys and girls acquire the ability to draw accurately from a set of directions simple figures in various ways. Still another result is increased power to analyze a set of directions and work quickly and accurately from these directions. Finally, the greatest result, that of a broader conception of space relations, is secured. Every problem and every method are focused upon that as an ultimate aim, and results show that this method of teaching concrete geometry in the seventh grade is meeting with reasonable success.

MORALS BY ROTE?

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Now that the world has been made safe for democracy, our next problem is how to make democracy safe for itself.

Democracy's strength depends upon that of its units. Its first great need is for citizenship—as Vice-President Marshall has phrased it—citizenship "of backbone." In the further safeguarding of democracy, then, one of the primary steps should be provision for the nurture of individual morals.

Conduct, of course, has long been considered the test of true education. In the effort to achieve dynamic ideals of conduct, numerous so-called systems and methods of moral instruction and training have been brought forth from time to time and have flourished to a greater or less degree.

Among these, the plan of pupil self-government has been conspicuous for its widespread popularity. There is probably no community of considerable size in the United States today that cannot point with pride, or the reverse, to its "school city" or "school republic" or tell the story of its experience with such. A national committee for propaganda work has led the movement. Various more or less complicated forms have been devised and tried out in operation.

Notwithstanding all this activity, the pupil self-government movement is not gaining ground very rapidly at present. One method of estimating the endurance value of an idea that has been before the public for a number of years is to measure the amount of attention that it has received and is now receiving. That the self-government plan is not advancing in favor, but may be said, in fact, to have passed the zenith of popular and professional notice, would be indicated by the following data, compiled from the *Reader's Guide*. They show

by periods, beginning with the year 1900, the number of popular and professional magazine articles that have appeared upon the general topic, "Self-Government in Education."

Between 1900 and 1904 inclusive				2	articles
" 1905	" 1909	"	.....	7	"
" 1910	" 1914	"	.....	27	"
Year of 1915			.....	2	"
Year of 1916			.....	3	"
Year of 1917			.....	3	"
Year of 1918 (to December 1)			.....	3	"

The figures just quoted seem to warrant the following inferences:

1. The extended discussion accorded the plan indicates that it contains a certain element of success.

2. The recent slackening of public attention suggests the presence of some characteristic weakness so persistent as to register a large percentage of failures.

Indeed, it is generally admitted that success is by no means universal or continuous. A committee of Seattle principals, appointed by Superintendent Frank B. Cooper in 1917 to investigate the status of the self-government movement in Seattle elementary schools, found that, while several schools had tried out the plan in some form or other, only two were still using it, but that they found it notably worth while. Others had found that the great expenditure of time and energy required was apparently not justified by the results obtained, and had discontinued it for that reason. A study of the literature upon the subject appears to indicate that this situation would be paralleled in many communities. Successes and failures are both clear-cut and outstanding.

It is the purpose of this paper to show that the element of success and the element of failure are in reality one and the same principle.

Stated more specifically, our points are as follows:

1. The undeniable success of pupil self-government in many cases is due to the opportunity given the pupil-citizen for *practice* in *doing right.*

2. The large percentage of failures of pupil self-government is due to the opportunity afforded the pupil-citizen for *practice* in *doing wrong.*

3. The valuable residue of the self-government idea is the unmistakable way in which both successes and failures point to the potency of the practice principle in making citizenship—good or bad.

It is well to inquire at the outset, what is pupil self-government? R. R. Smith, who writes of his successful experience with it in *Education* for December, 1916, frankly states that it is "government of the pupils, by the pupils, under the *invisible direction* of the teacher." The teacher neither does not nor cannot relinquish his responsibility, either legal or moral, and the leadership is his, however tacit it may be. Pupil self-government may be therefore said to be a device which the teacher uses to develop pupil self-control.

Discussion of the statement, that the chief factor of the success with which the plan has met in many instances is practice in doing right, may be grouped under two subheads:

a) "Practice in doing right" may be called the officially accepted slogan of the movement. Frank Kiernan, secretary of the Self-Government Committee, writes as follows (*Craftsman,* Vol. XXVI): "The essential fact is that the boys and girls are daily exercising their characters in community action, and realizing the power of community action."

Chairman Welling, of the same committee, stated it to be his belief that vote-selling could not take place if the voters were trained to realize the value and privilege of the ballot. He believes that practice in school republics, municipalities and the like gives such a training. The recurrence of the

"practice" idea in the official statements is indeed worthy of note. Other aims are specifically discarded. As a means of teaching about government—imparting the facts of civics—Mr. Kiernan thinks that textbook instruction is by far the better method. Neumann, another member of the national committee, likewise disavows the occasionally propounded informational aim, and insists that the greatest benefit to the pupils is to come from practice whereby they may learn the "meaning of membership in a democracy."

b) "Practice in doing right" has actually been found to be the productive factor of the plan in practical operation. Such is the statement of those who have had successful experience in its use. A Seattle principal relates the following incident, which occurred in his school:

> At this particular time, brothers who were twins had become more or less of a serious problem to the school, owing to their activity as mischief-makers. When the time for elections again drew nigh, and one of the twins was placed in nomination for the office of chief-of-police, there was naturally considerable dismay amongst the teachers. They finally suggested to the principal that he interfere and prevent the impending catastrophe. Instead of doing so, he chose to let matters take their course, and the notorious evil-doer was elected. Apprehension grew as he appointed his brother and companion in wickedness to be his assistant. At this point, however, the affair took a surprising turn. The police department became amazingly efficient, and through the discharge of their official responsibilities the "terrible twins" were themselves made over into respectable citizens, who were thenceforth a credit to their school.

Another Seattle school found that disorder upon the playground, for instance, such as swearing, fighting, etc., yielded readily when the responsibility for good citizenship was placed upon the pupils themselves under their own laws, administered by officials whose fitness for their respective duties had been thoroughly discussed in an election campaign.

The value of the factor of practice is further recognized by the quite general agreement among those who have been

successful with pupil self-government upon the point that a careful preparation in cooperative activities and public discussion is essential, in order that there may be present a spirit of self-control when the new régime takes charge. Professor Charles E. Rugh believes that there should be a more or less extended period of preparation, depending upon the spirit already existent within the given group. It seems that there is needed a sort of "apperceptive mass" of previous experience to guide the school aright in the new venture. This idea is also suggested by the statement of a Seattle principal that he found self-government to be most successful in his school when there was in attendance a group of children whose "tendencies" were toward self-control.

The frequent failure of the self-government plan is due to the opportunity it affords for practice in wrong-doing. The recurrent admonition for close supervision, which is given by most authorities, is almost tantamount to an admission of this fatal weakness. Incidents similar to the following show what may happen when supervision is not thorough.

> A few years ago, in the high school of a certain rapidly growing Pacific Coast town, one of the Senior girls had serious difficulty in overcoming a habit of arriving late for the morning session. In conference with the principal, she was interrogated as to her previous high-school experience, since she was a newcomer to the community. It appeared that for three years she had been attending a certain large city high school which was well known for its operation of student government. It seemed that all students of this school who arrived late were required to report to a student committee. However, she herself had not been held to strict punctuality for the past two years. The reason for this was, she explained, that she had "known the committee." Said committee was "hard on the Freshmen" because nobody knew them, but after the first year it was "all right."

Here was practice in wrong-doing, and habit-formation resulting from it. It would be interesting to know also what the effect was upon the members of the attendance committees.

Even close supervision sometimes fails, it would appear, to prevent wrong acts from becoming common. After operating the plan with considerable success for a time, one Seattle school found that its voters, very much as did their parents, frequently chose their officers unwisely. Carelessness upon the part of the officials was reflected by the pupils themselves. Abuses of power grew, disorder began to increase, and the principal found that more time was required to supervise the machinery of government than he had at his disposal. Two other principals found that tattling and spying increased alarmingly under pupil government, and that officers of the law were frequently indiscreet and overbearing. One boy who was elected mayor appointed his chum as chief-of-police, and a happy-go-lucky administration was instituted which was distressingly productive of misdeeds.

We are thus brought to our third proposition, namely, that the potency of the practice principle in moral training has been strikingly brought to light by both the successes and the failures of pupil self-government. It is interesting to note also that the whole matter serves but to give new emphasis to the old maxim, "We learn to do by doing."

The Seattle investigation showed a highly significant situation to exist there, which is no doubt typical of the effect that the self-government movement has had upon the country at large. It was found that while only two schools were still adhering to a form of self-government, practically all were employing one or more types of pupil cooperation or participation in the management of the school. Such organizations as boys' and girls' clubs, pupil advisory committees, etc., were commonly noted. These devices had been found to afford excellent opportunity for the exercise of real self-control, while they were less cumbersome than the school republic or school city, were therefore less susceptible of abuse, and consequently were more efficient in training for *good* citizenship.

Professor George Herbert Palmer has drawn an enlightening analogy between morals and speech. He points out that speech and morality, like many other activities, do not grow out of knowledge; that speech "is possessed long before we are aware of it. We employ it to express ourselves, and to come into contact with our neighbors. Rigid as are its laws, we still feel ourselves free in its use, though obliged to give to our spontaneous feelings forms constructed by men of the past. It has consequently been found a matter of extreme difficulty to bring a young person's attention helpfully to bear upon his speech. Indirect methods seem to be the only profitable ones."

The movement for self-government in education has at least served to force upon our attention a method of training for conduct that is natural, and therefore effective. We have, in training for speech, discarded the formal rules of abstract grammar for the language game, the drill, and the composition exercise, because we have believed the indirect method to be the one that gets the best results. However unwieldy and incoherent the original pupil self-government device may have been, it has played a heroic part in blazing the way to effective procedure in moral training. And the keynote of that procedure is the familiar truth, "We learn to do by doing."

Just as, in our modern scheme of language-training, every class is in a sense a language class, so should every school activity be regarded in one sense as an exercise in citizenship. Professor Palmer sums it up happily: "That school where neatness, courtesy, simplicity, obtain; where enthusiasm goes with mental exactitude, thoroughness of work with interest, and absence of artificiality with refinement; where sneaks, liars, loafers, pretenders, rough persons, are despised, while teachers who refuse to be mechanical hold sway—that school is engaged in moral training all day long."

Educational News and Editorial Comment

SOCIAL STUDIES IN THE HIGH SCHOOL

The cities of Washington and New York have been greatly agitated during the last two months about social instruction in the public schools. It is contended on the one side that radical teachers have introduced dangerous social doctrines into the classroom, and boards of education have found it necessary, as they believe, to check in some fashion these dangerous radical tendencies. On the other side it is contended by the parties who are held to have committed the offense that they were carrying out their plain duty in giving children in the schools information about current topics.

The Washington situation seems to illustrate in a very definite way the difficulties of this two-sided discussion. A high-school teacher was suspended for a week without pay by a board of education that had prescribed definitely that she teach current events. Among the current events which she

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found discussed in the papers were the League of Nations and the development of Bolshevism. No formal trial of this teacher was held by the board. There was an informal conference between the teacher and the superintendent and some members of the board. It does not appear that the teacher said anything about the League of Nations that has not been said by senators of the United States. It does not appear that her comments on Bolshevism were such as to mislead the students of the high school.

The action of the board was taken in a form that is worth reporting. The official notice of suspension to the teacher states that the action taken by the board was taken "because of your attempt to touch on and interpret certain economic and social subjects in which you were clearly an amateur and in which you revealed indiscretion and poor judgment in assuming to be anything else."

It is not the purpose of this editorial to judge of the wisdom or unwisdom of the action of the board nor of the merits of the original case. The incident furnishes, however, to the student of education occasion for sober thought. It is perfectly certain that the teachers of this generation are amateurs on most economic matters. It is also perfectly certain that in the great majority of cases the teachers who attempt to deal with current events will be drawn from a level of society which is opposed to the conservatism of many of our present economic practices. In New York City it is evident even to the casual observer that the radical tendencies of many of these teachers will tempt them to make use of the public institution to promote doctrines which will be repugnant to other members of the social group which they encounter. How is this difficulty to be met? By suppression of the discussions and by charges and by countercharges and prosecutions and fines? A course such as that which has been pursued at Washington and New

York is certain to lead to bitter partisan feelings and to unproductive controversies.

We have had occasion to point out several times in this section of the *Review* that there is only one possible method of dealing with this situation. There must be a vigorous effort made by intelligent people to cooperate in the careful preparation of suitable material for school instruction. It is equally idle to try to suppress discussions of social matters on the one hand or on the other hand to leave the discussions to the amateurish ignorance of most teachers. When school boards and the school authorities of the states of the Union and of the nation realize the magnitude of the problem which we are confronting in trying to prepare children for citizenship and when they are willing to give the necessary time and attention to these matters, we shall have a concerted intelligent movement in the direction of an adequate treatment of social matters in the schools. Until then we shall have controversies and inefficiency and failure in matters that are of cardinal importance to the public and every individual.

HIGH-SCHOOL FRATERNITIES

The Legislature of Illinois passed at its last session a bill prohibiting high-school fraternities. At that time the governor was not prepared to sign the bill because he believed that it was not legitimate to make criminals of children who had organized themselves into social groups in the high school. For two years the principals of Illinois high schools have been making a careful study of the governor's objections and of the methods of dealing with this difficult problem. The bill which they finally drafted is one which deserves careful study and is reproduced as follows:

For an Act to prohibit fraternities, sororities and secret societies in the public schools of the State, and to provide for the enforcement of the same.

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: That a public school fraternity, sorority

or secret society, as contemplated by this act, is hereby defined to be any organization, composed wholly or in part of public school pupils, which seeks to perpetuate itself by taking in additional members from the pupils enrolled in such school on the basis of the decision of its membership rather than upon the free choice of any pupil in the school who is qualified to fill the special aims of the organization.

Sec. 2. That any public school fraternity, sorority or secret society, as defined in Section 1 of this Act, is hereby declared to be an organization inimical to the public good.

Sec. 3. That it shall be the duty of school directors, boards of education, school inspectors, and other corporate authority managing and controlling any of the public schools of this state, to suspend or expel from the schools under their control any pupil of such school who shall be or remain a member of or shall join or promise to join, or who shall become pledged to become a member of, or who shall solicit any other person to join, promise to join or be pledged to become a member of any such public school fraternity or sorority or secret society.

Sec. 4. It shall be unlawful from and after the passage of this act for any person not enrolled in any such public school of this state to solicit any pupil enrolled in any such public school of this state to join or to pledge himself or herself to become a member of any such public school fraternity or sorority or secret society or to solicit any such pupil to attend a meeting thereof or any meeting where the joining of any such public school fraternity, sorority or secret society shall be encouraged. Any person violating this section of this act shall be deemed guilty of a misdemeanor and shall be fined not less than twenty-five dollars ($25.00) nor more than one hundred ($100.00) for each and every offense.

Sec. 5. This act shall not apply to any pupil of the University of Illinois or of any of the normal schools of this state.

The bill was slightly modified in its passage through the Legislature. The paragraph in which a fraternity is defined was objected to on the ground that it would prevent the organization of literary societies. A modifying phrase was therefore introduced to make it possible for the school by official rules to sanction an organization that elects its members in a fashion other than that required by the original paragraph.

A slight modification was also made in paragraph 5. The intent of the modification was to prevent any one going out

from the State University or from the normal schools to secure membership in the high schools of organizations that had their original seat in these higher institutions.

The bill as thus modified aims to protect all schools against outside interference with the pupil organizations and it attempts, so far as possible, to make these pupil organizations democratic in character.

A CORRECTION

Professor Breed calls attention to the following typographical errors in his article in the April *School Review:*

In Table V, p. 265, the improvement percentages, "Semifinal to Final," "By combined scores," should be as follows:

II	III	IV	VII	VIII	IX	X	XI	XII	XIII	Av.	II	III
7.0	...	10.1	3.1	....	...	3.1	.9	....	6.3	4.4	..	5.4

In Table X, p. 274, the value for algebra, "Comparable Groups," "Semifinal to Final," should be −2.7 instead of +2.7.

SELF-IMPROVEMENT THROUGH SELF-RATING

Professor Rugg has adapted to the use of education some of the methods of rating which were used during the war in the rating of soldiers. One of the important modifications which he has introduced is that of arranging the material in such a way that the rating cards may be used by the individuals who are being rated. We are very glad indeed to give currency to the announcement in some detail of the material which he has prepared and of the method of distribution which he has arranged. A series of rating forms available for the judging of high-school students and teachers is now ready for distribution.

The cards on which these rating forms are printed are designed to stimulate the pupil or teacher to improve himself by requiring him to rate himself. In order to place himself in one of the three groups described on the cards it will be neces-

sary for him to answer specific concrete questions which will serve at the same time the purpose of placing him and of drawing his attention to the qualities essential to success in his field.

The first edition of these cards will be distributed at cost for purposes of experimentation and collection of important data concerning the judgment of human qualities. They give promise of the following helpful results to schools which cooperate in their use:

I. Each student in the school can be required to rate himself at least once each year on each question in the form. The questions are grouped so as to define clearly the following sets of qualities:

1. Ability to learn—to assimilate new ideas.
2. Qualities of industry and attitude toward school work.
3. Qualities of leadership.
4. Team-work qualities.
5. Personal and social qualities.

II. Similarly the teacher can be urged to rate himself at least once each year on questions which will make him critical of his own strengths and weaknesses. Self-analysis is the first step to self-improvement. These cards will stimulate thoughtful consideration of the importance of improvement in certain directions. The teacher's qualities are grouped under the following heads:

1. Skill in teaching.
2. Skill in the mechanics of managing a classroom.
3. Team-work qualities.
4. Qualities of growth and keeping up to date.
5. Personal and social qualities.

III. A definite outcome of the use of the forms on high-school students will be to make the student critical of himself on qualities which are not ordinarily covered by school marks

or school tests. Thus the central function of the whole scheme is to stimulate self-analysis and self-improvement.

IV. Furthermore, Form B, the Rating Scale itself, enables a teacher to mark a pupil (or a principal a teacher) easily and very reliably.

V. Similarly for the teacher, a rating form of this kind filled out by both teacher and principal or superintendent, will lead to conferences between teacher and administrator concerning methods of improvement of the work. These conferences will be based upon attitudes of sympathetic understanding, and not upon resentment on the part of the teacher because of undiscussed and undefined ratings from a superior officer.

VI. This scheme makes available in the principal's office a complete file of records on the qualities of each student in the school. As many cards are available on a pupil as he has teachers in a given year. Such records make it possible for the principal to give definite and helpful advice to students, and to conduct frank and complete discussions with parents who interview him.

VII. Such blank forms sent home once a year will tend to develop helpful and frank discussion between the parent and the student—in some cases between the parent and the principal and teacher.

These forms are distributed by H. O. Rugg, School of Education, University of Chicago. Because of the unusually high cost of a small first edition, the cards will be distributed as follows: Sample copies postpaid 10¢ per card (cards are 8½ by 11 inches and contain complete directions). Cards in lots of 100 or less, 5¢ each. Special lower prices will be set for cards in larger quantities. With the printing of a second edition, a still lower price, set at cost, will be made. Cost will include printing, clerical service, postage, and expense in working up cooperative results.

THE MEETING OF COLLEGE REGISTRARS

During the latter part of April a very successful meeting was held of the college registrars from all sections of the United States. This organization has been holding annual meetings for eight years, but the ninth session was by all means the most successful in point of numbers and in point of program that has ever been brought together.

It is clear that the registrars have a unique opportunity to make a scientific study of the student body and of the work of the faculties. It is becoming apparent to these officers that there must be an application of scientific methods to the administration of higher institutions. The kinds of studies which have been common in elementary schools and secondary schools for the last ten years have for the most part been neglected by college officers with the result that there is more scientific information about the lower schools than about the higher educational institutions. As soon as the registrars begin to realize that their task is not one of mere bookkeeping but is a task of scientific study of college organization, there will grow up a science of higher education that will be productive in controlling the relations of colleges to secondary schools and of colleges to the needs of the community as a whole.

Some of the titles of the addresses are indicative of the interests of these officers and of the matters discussed at their meeting. Several of these titles may be quoted as follows:

A Uniform College Entrance Certificate.

Study of a Uniform Registration Procedure.

Determination of What Surveys on Educational Problems can be Undertaken during the Ensuing Year by a Large Group of Collaborating Registrars.

The Efficient Registrar—From a Dean's Point of View.

The Semester vs. the Quarter Plan.

Adaptability of Army Intelligence Tests in College Administration.

TESTS FROM 1845

The *Review* has been asked to give publicity to an announcement which unfortunately came too late to be inserted in the May number. The matter with which this announcement deals is, however, one of such general importance and the probability that the work will go on after the date specified is so large that we are inserting the announcement in spite of the fact that it comes somewhat late for the original purpose for which it was sent.

Otis W. Caldwell and S. A. Courtis invite superintendents, supervisors, and teachers, the country over, to cooperate with them in determining how well American school children of the present day can answer certain examination questions which originally were given in the Boston school in 1845. The report made by the School Committee at that time was sufficiently detailed to warrant the belief that interesting comparisons are possible in history, geography, arithmetic, grammar, vocabulary, and natural philosophy.

Not all of the questions are valid for school work of the present day. However, a selection of 30 questions suitable for eighth grade children has been made, and test papers, instructions, etc., are being printed in the number of 50,000. Thirty thousand of these are to be distributed free among representative cities of the country, and the remainder will be sold at cost[1] to those who will return copies of their results for the general tabulations.[2]

The tests are to be given between May 15th and June 1st, and will require about 100 minutes of class time. The scoring and tabulations are simple and will take from four to eight hours, depending on the size of the class. All those interested should write at once to S. A. Courtis, 82 Eliot Street, Detroit, Mich., for further information. The cooperation of superintendents of small towns, country superintendents, and teachers of rural schools will be particularly welcome.

THE METRIC SYSTEM

The experiences of the war have made English and American engineers keenly aware of the fact that the system of

[1] The cost of a full set of supplies including transportation both ways will be about 65¢ for a class of 25 children.

[2] As soon as returns are received, a copy of the Boston Standards will be sent. Later copies of the general tabulations will be provided. No results will be published by name without permission.

weights and measures employed in the two English-speaking countries is less flexible and economical than the French system of weights and measures that has long been in use in Europe, South America, and the Orient. In an age when standardization is the watchword of all manufacturing establishments and when international trade is sure to bring American manufacturers into the closest relations, both of competition and cooperation, with European manufacturers, it seems extraordinary that the English-speaking people should be so slow in readjusting the cumbersome system of measurement which they inherited from an age which was neither scientific nor standardized.

The metric system is treated in the books on arithmetic employed in American schools as a kind of curiosity. In many cases it is omitted as entirely useless. The rest of the world has long since recognized the fact that weights and measures are valuable just in the degree in which they serve as instruments of actual manipulation of machinery and material things. There is nothing sacred about the social institutions that gave rise to our present system of weights and measures, and yet the conservatism of our people has operated to exclude the scientific French system from everything except the laboratories where scientific work is done and the most progressive manufacturing establishments.

There will undoubtedly be a movement to bring the metric system into common use in American trade and commerce. The business world begins to realize the necessity of this, and a vigorous campaign is being waged, not by the scientific and academic students who have long been in favor of the system, but by such organizations as the World Trade Club of San Francisco. They are sending out pamphlets and enclosing stamped envelopes asking those who are interested in modernizing American ways to address petitions to the British Premier and the President of the United States. This movement

among commercial bodies is likely to spread and is also likely to be very effective in bringing about a change in the near future.

MEASURING SCHOOL RESULTS

Measurements of school results are most valuable when there is at hand comparative material against which a given school system may check its findings. For this reason the tests which have been extensively used are more productive than those which have not accumulated scores which can be regarded as standard. The difficulty in securing standard results covering a wide area arises from the fact that American schools are locally controlled and there is no central national authority which can carry on measurements on a large scale. Even state departments have been slow in seeing the importance of measurements as devices for supervision. Such standards as there are at the present time are the results of private investigation or of the endeavor of a few institutions which have made it a part of their program of research to develop such standards.

In most cases where tests have been widely used they have dealt with the fundamental subjects of the elementary curriculum. High-school teachers and high-school administrators have been slow to recognize the value of measurements and have been reluctant to undertake the labor of devising them.

It is significant in view of all these conditions that one state department of education should announce in its official bulletin an attitude favorable to measurements and should be able to show a record of much work done. Such an announcement is made by the Wisconsin Department. The opening paragraphs of the statement are as follows:

> The extent to which standard tests have been applied in Wisconsin during the past biennium may be judged from the reports by school superintendents and principals to the office of the state superintendent. In 1916–17

more than 36,000 children were tested in spelling and 7,200 in handwriting, representing all classes of schools. Additional returns from cities represent approximately 8,000 tested in arithmetic, 7,500 in reading, and 5,800 in composition. A considerable number of schools made use of standard tests of one kind or another, but did not report their results to the department. In a few more cases the results were not recorded in such form as to permit their being combined with those from other schools. Were all of these to be included in the figures above, they would undoubtedly be considerably increased.

For the year 1917–18 tests were generally given on a cooperative basis in both city and rural schools. Under this arrangement tests agreed upon in conference with superintendents, supervisors, and principals at their annual meetings were given at specified times during the year. As a result of this plan some 10,000 children in rural schools representing 31 counties were tested in arithmetic. In cities the number tested in arithmetic was more than 18,000, in reading 9,700, and in algebra 1,700. Fifty-nine cities reported that they gave the tests in arithmetic, 33 in reading, and 22 in algebra. A considerable number of city schools repeated the tests in arithmetic and algebra later in the year for the purpose of measuring the improvement.

The increasingly extensive use each year of standard tests in the city or rural schools throughout the country is revealing the many uses which tests serve. The testing of thousands of children is enabling us to establish standards of classroom achievement for all grades and ages in the several subjects tested. We have definite objective evidence of the results of our teaching. Hitherto we have had no standards of judgment except the ideas of individual teachers, supervisors, and superintendents as to the ability actually being acquired by pupils as they progressed through the grades, or as to what ought to be achieved.

STATISTICS ON FAILURES IN HIGH SCHOOLS

The teachers of the high schools of New York City publish each month a periodical called *Bulletin of High Spots*, which is described as a means of giving "expression to the best professional opinion of the teachers of the city."

As an example of the kind of helpful material which is published in this bulletin the following part of one of the articles may be quoted:

Testing for Ability to Learn a Foreign Language

A table has been recently prepared by the Statistical Division to show the percentage of first-term high-school students passing in various subjects in the term ending in January, 1918. The following figures are taken from that table, which represents all first-term pupils in all the schools and courses:

	Per Cent
English	83.9
French	69.2
German	75.0
Latin	70.1
Spanish	71.3
Mathematics (algebra)	74.8
Science (biology)	81.3
Bookkeeping	87.5
Sewing	95.8
Stenography and Typewriting	88.2

From these statistics it is evident that there is a greater "mortality" among first-term pupils in foreign languages than in any other branches of study.

This rather high percentage of failures is probably due to a variety of causes, some of which might be enumerated as follows:

1. Foreign-language study is an entirely new experience to most entering pupils. They have greater difficulty in "getting their bearings" in language study than they do, for example, in English or biology, subjects for which their training in the elementary schools has given them some preparation.

2. Some of the modern-language teaching is doubtless poor. For example, the attempt is sometimes made, consciously or unconsciously, to adapt the pupil to the syllabus. (The table given is for a period in which the new syllabus of minima, term by term, in modern languages was not yet in force.) Again, some French departments are facing for the first time the problem of teaching French to entering pupils, as that language was given only as a second language in some schools. These departments have found difficulty in adapting their teaching to the new situation.

3. Then there are the state examinations; to meet the Regents' requirements, especially those of the second-year examination, the rate of progress of the work of the first to the fourth terms has been too hurried.

4. Pupils in the elementary schools have not invariably been trained to grasp the simplest concepts of inflection and syntax in English.

5. First-term classes often are much too large, some of them having a register of from forty-two to forty-six and many having thirty-five to thirty-eight. Effective teaching of modern languages is quite impossible in crowded classes, especially of beginning students. Some departments of modern languages are carrying far more than their share of the "pupil-period load."

6. The assignment is often made of the poorest teachers (substitutes and others) to first-term pupils. These pupils should have the very best instruction the department can give.

7. Native inability of many individuals to learn a foreign language, especially a modern foreign language in which ear and tongue must be trained as well as eye and brain, may also be instanced. The opinion of the writer, which is corroborated by most of the heads of modern language departments in our schools, is that fully 20 per cent of those who study a modern language have no aptness therefor and should not waste their time and the teacher's time in undertaking that language. If this estimate is approximately correct, then a large proportion of the percentage of failures is accounted for.

Educational Writings

I. A REVIEW OF THE YEAR'S PROGRESS IN HIGH-SCHOOL SCIENCE

E. R. DOWNING
University of Chicago

The salient features of the past year in the high-school science situation are:

1. The appointment of new committees representative of all the sciences to work on the problem of the reorganization of science in the high schools.

2. The appearance of several books on the teaching of science.

3. The appearance of a separate survey of science teaching in a public-school system.

4. The publication of additional tests in science.

5. An unchecked production of science text-books. Surely the law of geometric rate of increase maintains in the field of high-school science texts. It is to be hoped that the struggle for existence will be keen, and further devoutly hoped that there will be a large elimination of the unfit.

There is a Central Committee on Reorganization for the Central Association of Science and Mathematics Teachers consisting of the chairmen of separate committees for each section. This committee, working through the several subordinate committees, is attempting:

A. To get some consensus of opinion of:

1. The general aims of science teaching in the high school and the specific aims for each science subject.
2. The most important concepts and generalizations to be taught in the several high-school science courses.

B. To devise:

1. Ways and means of determining experimentally the best methods of presentation of subject-matter.
2. To devise tests for finding out in how far the courses are accomplishing the desired results.[1]

[1] "Proceedings of the Eighteenth Meeting of the Central Association of Science and Mathematics Teachers," *School Science and Mathematics*, XIX, No. 3 (March, 1919), p. 197.

The high-school science curriculum was under vigorous discussion at the University of Illinois High School Conference. The science sections in joint session put themselves on record as follows:

"That we pledge our united support to the following program for science instruction in the high school:

"First: Two full year-courses, in what shall be essentially fundamental science. This work to be given in the first two years of the high school, or, where junior high schools exist, the same work may be done in the eighth and ninth grades or spread over the seventh, eighth, and ninth grades. This work, which is intended as the common pabulum of scientific knowledge, should be required of all students in so far as it is administratively possible.

"Second: As many full year-courses in the applied sciences, and in the special sciences, should be given in the later years of the high-school course as there is demand for, and as the size of the faculty and equipment will permit. These latter courses, unless it be in the case of agriculture and home economics for certain groups of students, should be purely elective, and should be so organized and taught that each year-course may answer as the equivalent of a first semester course in the subject in college."

A committee was named to report recommendations regarding the content of this first two years of fundamental science.[1]

There is a committee of the British Association "to consider and report upon the method and substance of science teaching in the secondary schools, with particular reference to the essential place for science in general education." The *School World*[2] gives some of the findings of this committee.

In how far the aims, method, and content of high-school science instruction will be determined by the findings of such committees it is difficult to say. When, however, one goes over the recommendations of past committees like those in the report of the Committee of Ten, the Committee of Fifteen, the American Naturalists Committee,[3] the Committee of the Central Science Association,[4] the National Education Association Committee,[5] and various reports of the subcommittees, it is surprising to see how many of the recommendations have been followed in the later developments of science instruction. One becomes optimistic after such a review of the value of such committee work. Possibly such reports merely give forceful expression to ideas that are unobtrusively working in the mass of the teaching force, but,

[1] *University of Illinois Bulletin*, XVI, No. 12, p. 77.
[2] *School World* (London), XX (1918), 28–32.
[3] *Education*, IX, 547–49.
[4] *School Science and Mathematics*, X, 101.
[5] *School Science and Mathematics*, V, No. 1.

even so, they focus attention on movements that are under way and so stimulate their progress.

Two notable additions were made this year to the science teachers' library of the pedagogy of science. Already we include in this list of books the old but still valuable *Systematic Science Teaching*, by Howe; *The Teaching of Biology*, by Lloyd and Bigelow; *The Teaching Botanist*, by Ganong; *The Teaching of Chemistry and Physics*, by Smith and Hall; *The Teaching of Physics*, by Mann; *Broad Lines in Science Teaching*, by Hodson; and *Science Teaching*, by Twiss. Now come *The Teaching of Science*, by Woodhull, and *The Teaching of Science in the Elementary School*, by Trafton.

The first of these new books is a series of papers and addresses, now gathered in book form by John F. Woodhull of Teachers College, Columbia University (Macmillan, $1.25). It deals largely with instruction in physics and chemistry, yet the principles discussed appeal to all science teachers. Such chapters as "The Educational Value of Natural Science," "Science for Culture," "Learning from Experience," "Science Teaching by Projects," and "The Imitation of the Masters" are indicative of the type of topics discussed.

Gilbert H. Trafton is instructor in science at the State Normal School, Mankato, Minnesota, and has had wide experience in science work in the elementary schools. His book is of interest to the high-school science teacher chiefly because it indicates the kind of science preparation pupils may be expected to bring to the high school in good school systems (Houghton Mifflin Co., $1.50).

In the series of reports of the General Education Board, New York City, on the survey of the Gary Schools there has just appeared the report on science by Otis W. Caldwell of Teachers College, Columbia University. This is noteworthy because it is the first attempt to present a reasonably complete survey of science instruction including both that of the grades and that of the high school in any school system. In the concluding chapter the surveyor commends some instructors seeking "to show the way in which science principles and science knowledge are used in the affairs of modern society." The botany and gardening of the Froebel School are "kept in close contact with the facts and needs of life . . . . . Gary has, however, shown courage and resourcefulness in trying to free science teaching from its remote and abstract character, in trying to bring it into touch with the pupil's experience and to relate it to his other school work. As illustrations of the way in which this is done may be mentioned some projects of the chemistry instruction. In the Emerson School the coal used by the Gary Schools is tested for calo-

rific value and the bills are paid on the basis of these tests to the entire satisfaction of the companies furnishing the coal and the school authorities. Commercial jellies were obtained and tested to determine the presence of glucose, cane sugar, and the nature of the coloring matters. Pupils went with the city food inspector and the Board of Health officers and later measured milk samples, spread plates, and counted bacteria colonies."

The author's final critical evaluation of the situation is as follows:

"Beyond a general and sound predilection for the concrete as embodied in the environment and experience of the pupil, it is impossible to discern at Gary satisfactory principles of organization or progression in science teaching. Unquestionably, the children are interested in their science work and derive pleasure from it, and to this end the work is of value. But science fulfils its educational mission, not simply by arousing interest in a disconnected series of phenomena or giving pleasure through a disconnected series of experiences, but by cultivating capacity to deal intelligently and vigorously with significant problems. This ought indeed to be both an interesting and a pleasurable task; but unless it involves order, persistence, and hard work, its educative effect is probably of minor importance. Unless so presented, science is likely to be a transient diversion rather than a profoundly formative and truly disciplinary influence in the pupil's development."

The above survey of the science at the Gary schools is also interesting because nearly half of t he pamphlet, pages 64–120, is devoted to the description and discussion of a number of tests given largely to the elementary-school pupils but in part also to the high-school pupils. There are nine of these tests, and they are used in five eighth-grade classes, one seventh-grade class, and in the twelfth-grade high-school classes in two of the schools. These tests deal, first, with observation and discrimination based upon subjects placed before the pupils; secondly, with the pupils' ability to recall experiences in science study; and thirdly, with the ability to see and interpret experiments or demonstrations made before the pupils. There are detailed tabulations of the results showing the accomplishment of each pupil and also summaries of the tests. In each test a certain number of points are tabulated which pupils should note in order to make a perfect score. Thus in Test 1, which is a comparison of an oak and an elm leaf, there are ten items to be noted. The lowest score is 1, the highest 9, and the mean for elementary-school pupils is 3.7. The mean for high-school pupils on this test is 5.

A suggestive range of information tests in science is reported in *School Science and Mathematics*, XIX, No. 3 (March, 1919), 228–33. A new test has also appeared during the year in chemistry.[1]

It is impossible to note in a small space the many new texts that have appeared during the year. No radical departure from the commonly used texts in physics and chemistry has come to hand, but there are some in biology and in general science that are worth noting. Transeau's *Science of Plant Life, High School Botany* (World Book Co., $1.48) is noteworthy because the relation of the plant to its environment is stressed and because the treatment is simple. A large amount of economic material is incorporated, and the word "incorporated" is used advisedly, for it is so fused with the general treatment that it is a natural part of the book, not something tacked on as an afterthought.

The same company has put out a simple foundation book on agriculture called *Farm Science*, by W. J. Spillman ($1.28). Mr. Spillman is chief of the Office of Farm Management of the United States Department of Agriculture. He has managed to cover the essential topics, and yet he keeps the book within the comprehension of the high-school pupil. The book is divided into four parts, treating respectively the soil, the plant, the animal, the farm.

The Elements of Economic Zoology, by Albert M. Reese (P. Blakiston's Son & Co.) seems merely an old-fashioned zoology with considerable economic material added. The treatment is taxonomic, the successive groups being taken up from the protozoa through the mammals. Little space is devoted to internal structure; much is given to external morphology and natural history. A large amount of valuable information is included in the book—valuable from the point of view of man's use of animals and their products. It would seem possible to devise an organization dependent upon economic relations instead of treating the successive groups and introducing under each the economic material.

William A. Locy's *The Main Currents of Zoology* (Henry Holt & Co.) is an attempt to trace the development of the important concepts and generalizations in zoology. The book is not intended as a high-school text in zoology, but will be a welcome addition to the high-school library, giving that personal touch with the men connected with the great ideas that is so stimulating a factor in high-school instruction.

The Elements of Animal Biology by S. J. Holmes (P. Blakiston's Son & Co., $1.35) devotes some ten chapters to the insects and the successive

[1] Hanor A. Webb, "A Preliminary Test in Chemistry," *Journal of Educational Psychology*, X, No. 1, pp. 36–43.

chapters to the other great groups of animals, including six chapters of Part I on the vertebrates. Part II, pp. 232–330, deals with animal physiology, while Part III is in a large measure devoted to evolution and heredity. The book is an admirable treatment from the point of view of science, but shows little tendency to the industrialization or socialization of biology that marks such books as Hodge's *Civic Biology* or Hunter's *Civic Biology*. It marks no advance, but is rather a reversion to an old type of text.

Three texts in general science are to be added to the output that seemed quite adequate already. Brownell's *Textbook in General Science* (P. Blakiston's Son & Co., $1.00), *Introduction to the Study of Science* by Smith and Jewett (Macmillan, $1.40), and *The Science of Everyday Life*, by Van Buskirk and Smith (Houghton Mifflin Co., $1.40). The title of the last book seems to describe adequately the content of all of them. All are quite voluminous, running from nearly four hundred to over six hundred pages. All contain much exceedingly interesting material, and if it be the purpose of first-year science to acquaint the pupil with his environment, certainly it would be hard to find a corner of said environment left untouched by such texts. *The Science of Everyday Life* is divided into parts, units, projects, problems, and topics. To label "Air and Fire" a project does violence to the term. The problems and individual projects given seem admirable. The units are "Air and How We Use It," "Water and How We Use It," "Foods and How We Use Them," "Protection—Homes and Clothing," "The Work of the World."

What to teach in general science is apparently being determined by the trial-and-error method. On this basis we may welcome these new trials, only hoping that the real educative values of science may not be lost in a maze of interesting reading.

II. BOOK NOTES AND REVIEWS

A new book on vocational civics.[1]—Teachers who are interested or engaged in the work of vocational guidance in the eighth or ninth grade, whether as a separate subject or as a phase of civic training, are painfully aware of the dearth of suitable material in this vital field. All such will give a cordial welcome to this admirable little book.

After an introductory discussion of the importance of a right choice of one's life-work, there are chapters on the following industries and occupations: government service; earth occupations—agriculture, forestry, mining, and

[1] Frederick Mayor Giles and Imogene Kean Giles, *Vocational Civics*. New York: Macmillan, 1919. Pp. viii+252. $1.30.

fisheries; transferring occupations—transportation and banking; manufacturing and the building trades; commercial occupations, including advertising; the professions—law, medicine, teaching, journalism, social service, library, engineering, chemistry; and personal services—dressmaking, millinery, tailoring, hotels, restaurants, musicians, artists, and actors. The concluding chapter summarizes in an effective way the personal qualifications essential, or desirable, for success in all occupations.

In treating each occupation, the authors as a rule discuss the chief qualifications necessary for success, the extent and kind of preparation required, the opportunities for advancement afforded, and the disadvantages incurred. In a volume of this size the treatment of each occupation is necessarily brief. But, in general, the pitfall of abstract generalizations into which so many fall who attempt brevity has been avoided. In fact, one of the most admirable qualities of the book is the skilful use of appropriate anecdote and illustration to make important truths concrete.

Each chapter is supplied with questions and problems of more than ordinary merit. A list of "references for further reading" is also given; most of the works cited are up to date and of distinct value. Their utility, however, would be increased in some instances if specific pages or chapters were given.

The book contains pictures which really illustrate the subject-matter. The style leaves little to be desired; it is well within the understanding of the pupils for whom it is intended. Mechanically the volume is pleasing. It is printed on good paper and in clear type; the binding unfortunately is too weak for a school text. All in all, the book is excellent.

Some recent books on the World War and reconstruction.—The youthful readers have been more or less neglected in the majority of the books and articles that have appeared during the past four years to explain the World War and its consequences. To fill the gap in this sort of material a reading book for children in the upper grammar grades has recently appeared.[1] The volume is made up of stories of the World War which are intended to set before the reader the war's unparalleled deeds of heroism with the aims and ideals which have inspired them. The stories are well selected and well graded. The language is clear and simple. The pronunciation of the proper name is taken care of in an excellent pronouncing vocabulary at the close of the book. The volume should meet with immediate success.

During the summer of 1918 Professor W. H. Hobbs, of the University of Michigan, delivered a course of lectures on patriotism at the University of

[1] J. G. Thompson and Inez Bigwood, *Lest We Forget: World War Stories*. Chicago: Silver Burdett & Co., 1918. Pp. viii+347.

Pittsburgh. These lectures have recently been published in book form.[1] Besides a number of chapters on the various phases of the war there is one on the teaching of patriotism which will make the book a valuable addition to a history teacher's library. There is an attempt in the volume as a whole to reconstruct a clear picture of the origin of the war and to point out some of its important consequences. Just how well Professor Hobbs has succeeded in his task might be inferred from the following quotation from the Introduction written by the late ex-President Roosevelt: "It is the literal truth that if I could choose only one book to put in the hand of every man and woman in the United States at this time, I would choose the book of Professor William Herbert Hobbs."

Another book relating to the war and one in which teachers of history will be interested is Frederick Moore's *The Chaos in Europe*.[2] The moral, political, and commercial situation in Russia, the Balkans, and Turkey is portrayed in some detail. Mr. Moore's first-hand contact with these countries has qualified him to speak with authority on the problems he discusses.

Many persons at the present time are interested in the problems of reconstruction which the ending of hostilities brought. A few books are beginning to appear on the general subject. One which discusses a number of reconstruction problems has recently come to this office.[3] Besides a chapter on the need of reconstruction and one on a reconstruction plan for the United States, there are chapters on reconstruction in foreign countries, economic results of the war, war control in foreign countries, war labor control, and war control as it relates to food products and fuel administration. It is difficult to determine just what audience the author had in mind in writing the book. His presentation is certainly not on the high-school level. Senior-college students may be able to read the material with interest and profit if they do it in connection with courses in economics. The general reader will find the book too heavy for avocational reading.

A book on health education.—"In the health of a people lies the wealth of the nation" is a saying of Gladstone. Considering the fact that out of 2,510,706 American men examined on the first draft, 730,756, or about one-third, were rejected as physically unfit, we are lamentably poor according to the philosophy of Gladstone. Moreover, the physically deficient are more

[1] *The World War and Its Consequences*. New York: Putnam, 1919. Pp. xiv+446. $2.50.

[2] FREDERICK MOORE, *The Chaos in Europe*. New York: Putnam, 1919. Pp. ix+192. $1.50.

[3] ISAAC LIPPINCOTT, *Problems of Reconstruction*. New York: Macmillan, 1919. Pp. 340.

common among rural children than among urban children. In spite of this fact, the health supervision of rural children has been almost totally neglected compared with that of their city cousins.

However, present tendencies are more hopeful that some attention is to be given to the health of the rural child. A recent book[1] should do much to draw the attention of school people to this important phase of education of rural children. Although there is much common material which both the city and the country teacher should know, the book aims to treat the subject from the country teacher's point of view. In realizing this aim the author gives an abundance of detailed suggestions as to methods and devices for promoting the health of rural children. Well-chosen diagrams, charts, and pictures make the subject more intelligible.

Some of the topics, all of which are interesting and scientifically treated from the rural teacher's point of view, are: securing the cooperation of parents and community; planning the course of study in hygiene; the water supply and sewerage; war on flies, mosquitoes, and other disease-carrying insects; heating and ventilating; play and physical education; posture and health; the care of the teeth, eye, and ear; the measurement of the teacher's work in hygiene.

This is a book which may be profitably read by any teacher whether in service or in training. It is especially adapted to students in normal schools, country training classes, and teachers' reading circles. It is a book in a field all too long neglected, and teachers generally, especially rural teachers and supervisors, will want to have it.

Two annual reports.—Annual reports of educational institutions are usually not read because they are not interesting and attractively gotten up. The report[2] under discussion is an exception—it is intensely interesting and attractively gotten up.

It describes the activities of the General Education Board and its agents for the year 1917–18. Some of the year's activities financed by the Board and described in this report are those pertaining to various colleges and universities, medical education, studies and research, public education, negro education, farm demonstration work, and the Lincoln School of Teachers' College, Columbia University. The annual statement of the treasurer occupies a portion of the report, and this includes a historical review of the funds of the Board as well as the status of the funds during the past year.

[1] J. Mace Andress, *Health Education in Rural Schools*. Boston: Houghton Mifflin Co., 1919. Pp. xii+321. $1.60.

[2] *Annual Report of the General Education Board, 1917–1918*. New York: General Education Board, 61 Broadway. Pp. x+116. Free.

Many diagrams and pictures go a long way to make the report as interesting and intelligible as it is. These are materials unfortunately not found in the usual traditional report.

The Board has appropriated to date over twenty-three millions of dollars for education, and during the past year alone its appropriations were over two and a half millions—an amount greater than the total annual school revenues of many of our American states.

It is believed that school people in general will want to be informed of the yearly activities of such a powerful philanthropic educational foundation as this. These annual reports may be had free, as well as many other of the Board's publications, upon request.

A second annual report[1] which has just come to hand is one of a state superintendent of education, namely, that of South Carolina. It, too, attempts to get away from the traditional type of report. Discussion of the year's progress in education, together with recommendations for legislation, are given in the first part of the report. Then follow summaries of the most important features of the statistical tables which make up the bulk of the report. Many more summaries and interpretations of these statistical tables would have made them more intelligible.

One of the "School Efficiency Monographs."—The World Book Company has published to date eleven volumes in its "School Efficiency Monographs" series. Volume X^2 of the series has just come to hand and is entitled *The Reconstructed School.* Rather an up-to-date title, we think, and the subject is treated in an up-to-date way.

Like Dewey's *The Schools of Tomorrow*, Mr. Pearson's book presents an educational viewpoint. Quoting from the preface, "its purpose is to stimulate teachers to elevate the goals of their endeavors," to the end that larger and better results can be secured in education.

Mr. Pearson's book deals with the "variables" in school processes, and these "variables," he says, should be subjected to the closest study for the sake of economy of time and effort. Some of the "variables" with which he deals are indicated by the subject-matter of the different chapters as follows: a preliminary survey of the task before the school; the past as

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[1] *Fiftieth Annual Report of the State Superintendent of Education of the State of South Carolina, 1918.* Columbia, S.C.: Published by Gowzales & Bryan, State Printers, 1919. Pp. 247. Free.

[2] FRANCIS B. PEARSON, *The Reconstructed School.* Yonkers-on-Hudson, N.Y.: World Book Co., 1919. Pp. vii+120. $0.90.

related to the present; the future as related to the present; integrity; sense of responsibility; appreciation; aspiration; initiative; imagination; reverence; loyalty; democracy; serenity; life.

Teachers will find the book full of inspiration and help, and all who are interested in schools can read it with profit.

Two books of essays and addresses.—The first of these is a book of essays[1] which are based upon a series of addresses delivered by the author before the New York high schools under the joint auspices of the New York Board of Education and the New York Chamber of Commerce. The chapters, therefore, retain some of the characteristics of the spoken address.

The book, however, is more than the usual inspirational volume of essays and addresses. It is made of a more practical character through the medium of the questionnaire at the end of each chapter or essay.

Plato would revel in this volume as an upholder of the "art of living," which art has been by no means universally practiced since his day.

This book should be in every library of the land and should be read by every boy or girl of secondary-school age. For where is the youth who does not need to be wholesomely inspired? No book can be more stimulating than this.

The second book is one of addresses.[2] These are baccalaureate addresses which have been given by President Thwing, of Western Reserve University, from 1903 to 1918. It is a companion volume to a similar one published by President Thwing in the year 1903 containing addresses given from 1891 to that time.

President Thwing has written widely on college subjects, and those who enjoy reading inspirational addresses and sermons should see this, his latest work.

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[1] Harry Collins Spillman, *Personality*. New York: Gregg Publishing Co., 1919. Pp. 206. $1.50.

[2] Charles Franklin Thwing, *The College Gateway*. Boston: Pilgrim Press, 1918. Pp. 277. $1.50.

III. CURRENT PUBLICATIONS RECEIVED DURING THE PAST MONTH

A. GENERAL EDUCATIONAL METHOD, HISTORY, THEORY, AND PRACTICE

ANDRESS, J. MACE. *Health Education in Rural Schools.* Boston: Houghton Mifflin Co., 1919. Pp. xii+321.

CALDWELL, O. W. *The Gary Public Schools, Science Teaching.* New York: General Education Board, 1919. Pp. xix+125. $0.10.

SHARP, F. C. *Education for Character.* Indianapolis: Bobbs Merrill Co., 1917. Pp. 453.

SHARP, H. *Progress of Education in India, 1912–1917.* 2 vols. Calcutta, India: Superintendent of Government Printing, 1918.

B. BOOKS PRIMARILY FOR ELEMENTARY-GRADE TEACHERS AND PUPILS

ATKINSON, ALICE M. *An Introduction to American History.* Boston: Ginn & Co., 1919 (revised edition). Pp. xix+344. $0.88.

CARROLL, LEWIS. *Alice's Adventures in Wonderland.* New York: American Book Co., 1918. Pp. v+154.

GATHANY, J. M. *American Patriotism in Prose and Verse.* New York: Macmillan, 1919. Pp. xiv+305. $0.32.

LASELLE, MARY A. *Short Stories of the New America.* New York: Henry Holt & Co., 1919. Pp. xiv+224.

MCGLAUFLIN, ISABELLE. *Sewing Handicraft for Girls.* Peoria, Ill.: Manual Arts Press, 1918. Pp. 116. $1.35.

SKINNER, E. L. and A. M. *Happy Tales for Story Time.* New York: American Book Co., 1918. Pp. 180.

SMITH, LAURA R. *Primary Seat Work.* Chicago: Beckley-Cardy Co., 1919. Pp. 160. $0.60.

C. BOOKS PRIMARILY FOR HIGH-SCHOOL TEACHERS AND PUPILS

BAKER, G. P. *Dramatic Technique.* Boston: Houghton Mifflin Co., 1919. Pp. vi+531. $3.00.

CRAWFORD, D. G. *The Study of English.* New York: Macmillan, 1919. Pp. xx+338. $1.20.

GARDNER, E. H. *Constructive Dictation.* New York: Gregg Publishing Co., 1919. Pp. 376. $1.00.

GEDDES, JAMES. Hartzenbusch' *Juan de Las Vinas*. Boston: Ginn & Co., 1919. Pp. xv+136.

HATHEWAY, JOEL, and BERGE-SOLER, EDUARDO. *Easy Spanish Reader*. New York: Macmillan, 1919. Pp. xiii+386. $1.10.

HOBBS, WILLIAM HERBERT. *The World War and Its Consequences*. New York: Putnam, 1919. Pp. xiv+446. $2.50.

LYNDE, CARLETON J. *A Laboratory Course in Physics of the Household*. New York: Macmillan, 1919. Pp. xv+146. $0.90.

MANLY, JOHN M., and RICKERT, EDITH. *The Writing of English*. New York: Henry Holt & Co., 1919. Pp. xi+509.

OSGOOD, FREDERICK H. *La France héroïque: Episodes de la Grande Guerre*. Chicago: D. C. Heath & Co., 1919. Pp. vi+174. $1.00.

PEABODY, JOSEPHINE P. *The Piper—A Play in Four Acts*. Boston: Houghton Mifflin Co., 1919. Pp. 212. $0.52.

PORTER, TILLA B. *Parliamentary Law Simplified*. Cleveland, Ohio: Evangelical Press, 1915. Pp. 48. $0.50.

ROSENTHAL, DANIEL C., and CHANKIN, VICTOR. *Grammaire de conversation et de lecture*. New York: Henry Holt & Co., 1919. Pp. viii+423.

ROSSMAN, MARY B., and MILLS, MARY W. *Graded Sentences for Analysis*. New York: Lloyd Adams Noble, 1918. Pp. 77. $0.40.

THOMPSON, J. G., and BIGWOOD, INEZ. *Lest We Forget: World War Stories*. Chicago: Silver Burdett & Co., 1918. Pp. viii+347. $1.00.

VAN BUSKIRK, EDGAR F., and SMITH, EDITH L. *The Science of Everyday Life*. Boston: Houghton Mifflin Co., 1919. Pp. xv+416. $1.40.

WALSH, GERTRUDE M. *Primer Libro de Lectura*. Boston: D. C. Heath & Co., 1919. Pp. xii+119. $0.52.

WALSH, JOHN E. *Business Arithmetic*. New York: Gregg Publishing Co. 1919. Pp. viii+496. $1.20.

WILKINS, L. A. *First Spanish Book*. New York: Henry Holt & Co., 1919. Pp. xv+259.

D. PUBLICATIONS OF THE UNITED STATES BUREAU OF EDUCATION AND SIMILAR MATERIAL IN PAMPHLET FORM

Recent issues of the Bureau of Education:

ANDREWS, B. F. *Statistics of Agricultural and Mechanical Colleges*. Bulletin, 1918, No. 41.

BRIGGS, T. H. *Secondary Education*. Bulletin, 1918, No. 47.

CALVIN and LYFORD. *Home Economics*. Bulletin, 1918, No. 50.

HOOD, W. R. *State Laws Relating to Education Enacted in 1915, 1916, and 1917.* Bulletin, 1918, No. 23.

SEIPERT, A. F. *Courses of Study for the Preparation of Teachers of Manual Arts.* Bulletin, 1918, No. 37.

WINCHESTER, A. M. *Kindergarten Supervision in City Schools.* Bulletin, 1918, No. 38.

Recent issues of the Federal Board for Vocational Education.

Home Economics Organization and Administration. Bulletin No. 28, February, 1919.

Clothing for the Family. Bulletin No. 23, December, 1918.

BEARD, MARGARET K. *The Relation Between Dependency and Retardation.* Minneapolis, Minn.: University of Minnesota, 1919. Pp. 17. $0.25.

CRAIG, CLARA E. *The Beginnings of Reading and Writing in the Rhode Island Normal School.* Published by Rhode Island Normal School. Pp. 32.

DOWNEY, JUNE E. *The Will-Profile.* Laramie, Wyoming: University of Wyoming, 1919. Pp. 37.

FRENCH and SVENSEN. *Mechanical Drawing in High Schools.* Columbus, Ohio: Department of Public Instruction, 1919. Pp. 23.

E. MISCELLANEOUS PUBLICATIONS

HAYES, D. A. *The Synoptic Gospels and the Book of Acts.* Cincinnati, Ohio: Methodist Book Concern, 1919. Pp. 354. $2.00.

LEWIS, A. M. and SINGER, E. A. *The Winston Simplified Dictionary.* Philadelphia: John C. Winston Co., 1919. Pp. xxii+820.

MOORE, FREDERICK. *The Chaos in Europe.* New York: G. P. Putnam's Sons, 1919. Pp. ix+192. $1.50.

The History Circle. *British-American Discords and Concords.* New York: G. P. Putnam's Sons, 1918. Pp. viii+85. $0.75.